

The LAEDC logo consists of the letters "LAEDC" in a bold, sans-serif font, enclosed within a white square that is slightly tilted to the right.

**LAEDC**

**LOS ANGELES COUNTY  
ECONOMIC DEVELOPMENT CORPORATION**

*Collaboratively Advancing Growth and Prosperity for All*

# 2022

## ECONOMIC FORECAST

**Navigating Through Continued Disruption and Uncertainty**





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# FOREWORD

As Los Angeles County's principal economic development organization, the **Los Angeles County Economic Development Corporation (LAEDC)** produces an annual forecast to assess and predict key national, state, regional, and local economic indicators, as well as to look beneath those "headline" indicators at deeper and more detailed trends. Our LAEDC forecasts focus on key issues, pressing economic concerns, and longer-term trends at the local, state, and national levels.



The Los Angeles region, like California and the rest of the United States, experienced a dramatic economic decline in 2020 due to the COVID-19 pandemic. The flow of economic activity was stanchied seemingly overnight across many industries. The economic impact of COVID-19 has been highly variable depending on the segment of the population and economy involved. **Due to structural distortions that existed long before the pandemic, low-income workers, small businesses, people of color, and women have continued to be disproportionately impacted by the virus in terms of cases, deaths, jobs lost and business insolvencies.**

We continue to highlight the need for those engaged in economic development to construct more resilient, industrially diverse and inclusive economic systems to provide defense against uncertain futures, to offer economic security and assistance to those most vulnerable to economic shocks and to connect more of our region's residents to the industrial drivers of our economy.

Last year, we highlighted how COVID-19 had increased the severity of pre-existing challenges and inequalities present in our region and beyond. While pre-existing inequity and the disparate effects of the pandemic make an inclusive recovery a necessity for more equitable growth in the long-term, with the ongoing pandemic it is too soon to tell how successful the efforts taken to reach this goal have been.

**This year we zoom back out a bit to capture the wide array of developments and upcoming events that are poised to impact us all in this upcoming year.**

With a significant turn towards pre-pandemic normalcy in 2021, the economy was characterized as being on a general path of recovery, the trajectory of which was impacted by surges in the virus and the resultant avoidance behavior.

This year, **our economy is in a period of transition**; 2022 portends to be a year of change as our economy continues to recover from, and adapt to, the disruption caused by the COVID-19 pandemic.

The U.S., California, and Los Angeles County economies have significantly recovered since the depths of the pandemic-induced downturn in early 2020. Nevertheless, a number of important economic indicators still remain below their pre-pandemic levels.

The introduction of vaccinations against COVID-19 likely muted the severity of the virus in 2021 compared to what would have otherwise occurred. However, the number of U.S. virus cases, hospitalizations, and deaths associated with the virus in 2021 were higher than in 2020.

**As time has progressed, it has become abundantly clear that the pandemic has led to permanent changes in the economy.**

The pandemic has triggered long-lasting changes within industries and has accelerated changes that have been taking place over time. We explore multiple economy-wide shifts that were taking place prior to COVID-19 that have been accelerated, including remote work effects and their associated economy-wide consequences, increased digitization of service provision, labor market supply shifts, and the shift towards e-commerce.



**Fiscal and monetary policy have played a key role in determining where we currently find ourselves and where we expect to go over the next couple of years.**

This time last year, the Federal Reserve enacted expansionary monetary policy in light of the deep recessionary effects of the pandemic. Today, one of the potential clouds we identified in last year's forecast, inflation, has been taking center stage. Demand-stimulating combined federal fiscal and monetary policy and behavioral changes in consumption combined with global production shortfalls have led to supply chain issues and rising price levels. **Higher rates of inflation redistribute wealth in a disruptive way, they reduce wages in real terms for all earners, but disproportionately impact lower-income households who have less disposable income; with a higher percentage of their income spent on necessities, these households cannot offset rising prices by shifting discretionary spending as higher-income households are able to do.**

**Looking ahead, we can expect a tightening of monetary policy; federal funds rate hikes are on the table to assuage rising inflation concerns.**

Simultaneously, more money will be injected into the economy through additional fiscal policy measures including the \$1.1 trillion infrastructure bill which is expected to bring at least \$39.4 billion into California over the next five years. While the significant investment in infrastructure will begin funding large projects and will provide much needed jobs across the skills spectrum, this expansionary fiscal policy spending could further apply increasing inflationary pressure. We still expect it to take multiple years for the economy to fully recover from the pandemic-induced downturn, especially for industries that have been hit the hardest. Recovery for some industries that are undergoing fundamental changes as a result of the pandemic may bring permanent changes after a period of disruptive transition.

As noted last year, the shock of the COVID-19 pandemic is a reminder that economic forecasting cannot anticipate such unpredictable, exogenous events. Forecasts rely on certain assumptions.



Our economic forecast this year assumes (1) Fed monetary policy is planned and executed in a manner that does not significantly disrupt the ongoing economic recovery (2) future pandemic-related developments will not lead to behavioral responses by individuals, organizations, or governments that serve to substantially reduce economic activity. With this in mind, the LAEDC presents the 2022 Economic Forecast: **Navigating through continued disruption and uncertainty.**

Sincerely,  
**LAEDC Institute for Applied Economics**



# COVID-19 IN 2021

**The COVID-19 pandemic represents an unprecedented economic shock that has not only temporarily derailed the economy, preventing it from continuing down its previous path, but has also led to permanent shifts that will set the economic system on a new trajectory.**

Before we can forecast where the economy is headed, it is helpful to consider where we are coming from. For nearly a decade prior to the COVID-19 pandemic, Los Angeles County exhibited strong economic fundamentals. Unemployment plateaued at around **4.5 percent from mid-2017** through the beginning of 2020. In addition, we were experiencing wage growth, and real household income was consistently rising, reaching levels approximately **11 percent higher than in 1990** and about **18.5 percent higher than in post-recession 2010**. Nonfarm employment in Los Angeles County totaled over 4.6 million in February 2020, right before the COVID-19 pandemic struck. The state of California and the Los Angeles region were experiencing consistent, although slowing, GDP growth during the years leading up to the COVID-19 pandemic.

California and the Los Angeles region's consistent economic performance over the previous decade reversed quickly and significantly after the pandemic struck in March of 2020. **The COVID-19 pandemic surged in two waves during 2020.** The first wave struck in the summer beginning in July and ending in mid-August. The second much more significant wave hit in the month of November and did not recede until mid-February of 2021.



**The COVID-19 pandemic has dramatically altered lives and significantly impacted regional, state, national, and global economies.**

Overall, low wage workers experienced disproportionate levels of unemployment compared to high wage workers. This development was mostly the result of the differences in the types of occupations each worker type was employed in and the occupation-specific impact of the pandemic. Certain industries have performed better than others during the pandemic. Small businesses in non-essential industries whose operations require high levels of personal interaction were significantly negatively affected by the pandemic. Not all of the most heavily impacted service industries have fully recovered to pre-pandemic activity levels.

# COVID-19 IN 2021

## 2021: A Year of Vaccinations and Learning to Live with the Virus

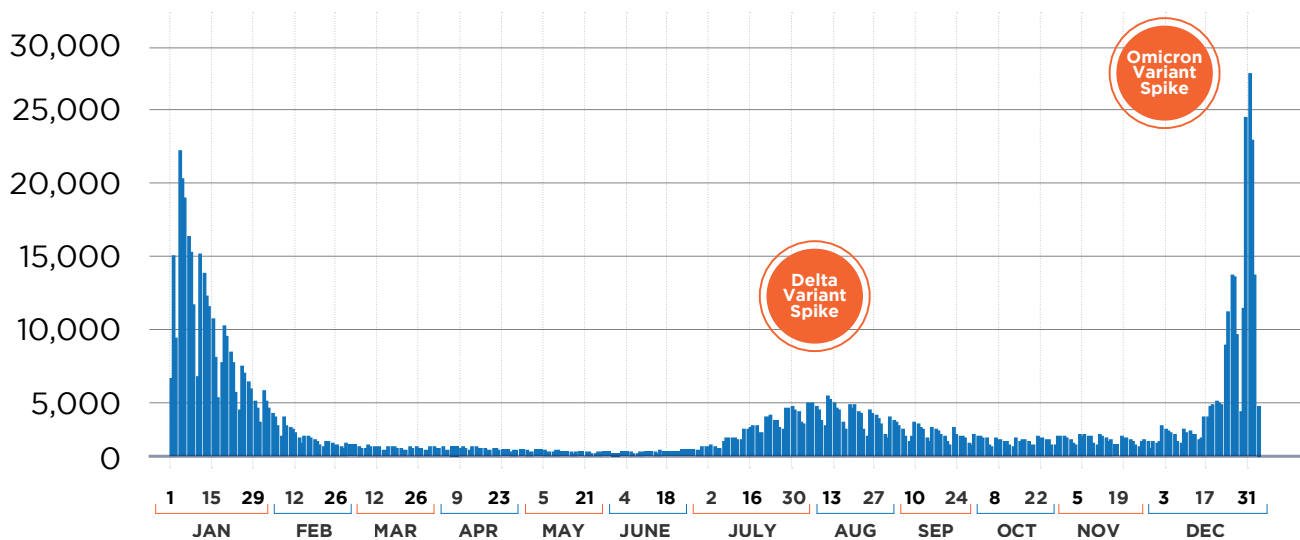
In 2021, Los Angeles County experienced a significant return to normalcy that was characterized by relatively high vaccination rates.



The early winter months of 2021 were characterized by high COVID-19 case numbers in Los Angeles County, with seven-day average daily cases reaching a then record-setting peak of 16,121 cases on January 8, 2021 (Figure 1). Cases declined significantly in March and remained relatively low and steady until a case spike took place in July related to the Delta variant. While the summer spike in cases receded somewhat by mid-September, cases remained above the lows that characterized the period from March to July.

In late December 2021, a rapid spike in COVID-19 cases, specifically due to Omicron infections, took place leading to an increase in hospitalizations in Los Angeles County. Official case numbers almost certainly significantly undercount actual cases due to increased use of at-home testing, whose positive results are not reported. The Omicron variant is particularly transmissible and has spread more quickly than previous virus variants. However, Omicron tends to cause less severe illness than previous COVID-19 variants.

Figure 1: **2021 Daily Cases in LA County**





# COVID-19 IN 2021

The COVID-19 vaccination process began in mid-December of 2020. As of December 16, 2021, just under **6.8 million (70 percent)** of Los Angeles County residents aged 5 and up were fully vaccinated.<sup>1</sup> The FDA began authorizing booster shots beginning in the summer of 2021 to combat the decline in vaccine effectiveness. Recently, boosters have been found to provide significant protection against the Omicron variant. As of December 20, almost **2.25 million boosters** have been administered in Los Angeles County.<sup>2</sup>



**6.8 million**  
Vaccinated



**2.25 million**  
Boosters

**The year 2021 was characterized by a significant return to pre-pandemic normalcy.**

Schools resumed in-person instruction, restaurants opened to diners, gyms resumed operations, and travel increased. However, a transition to a new normalcy has also occurred. For example, increased digitization in education and healthcare has transformed those industries and will likely remain an important feature. Furthermore, remote work shifts have taken place that are unlikely to be completely reversed and will have a variety of significant economic implications.



<sup>1</sup>LA County Department of Public Health. "LA County COVID-19 Vaccine Dashboard." <http://publichealth.lacounty.gov/media/Coronavirus/vaccine/vaccine-dashboard.htm>

<sup>2</sup>California Health and Human Services Agency. "COVID-19 Vaccine Progress Dashboard Data." <https://data.chhs.ca.gov/dataset/vaccine-progress-dashboard>

# TRANSFORMATIVE SHIFTS Observed in 2021

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**2021 was characterized by a number of transformative shifts that will leave a lasting imprint on our economy.**

Developments in national fiscal and monetary policy will be significant determinants of economic performance in the coming years. Supply chain issues will affect not only economic performance but also the future rate of inflation. Finally, the transition to remote and freelance work and the trend towards the digitization of the provision of certain services will likely transform the economy in a variety of ways.

## **National Economic Policy**

**National fiscal and monetary policy in the coming years will be significant determinants of economic performance and the inflation rate.**

Inflation negatively affects the economy in a number of ways. The first problem with inflation is informational in nature. Unfortunately, in a world of inflation it becomes difficult to know whether observed changes in the prices of specific things or changes in interest rates reflect real events, so mistakes are made in the allocation of productive resources. Furthermore, **inflation-induced unpredictability over the long run reduces the willingness to lend and borrow as well as to invest**, thereby reducing the flow of income into investment and therefore future production.

**The second issue with inflation is redistributive. Higher rates of inflation redistribute wealth in a disruptive way.**

For example, workers whose wages do not adjust along with inflation will see their real wages and standards of living decrease. Inflation also results in a loss of purchasing power to individuals with fixed income that has not been inflation-adjusted as well as a loss in wealth to individuals who hold cash balances. Finally, another redistributive effect of unanticipated inflation is that it redistributes wealth from creditors to debtors. Borrowers repay creditors with dollars that are worth less than anticipated at the time creditors lent money to borrowers.

**While inflation impacts the entire economy, low-income individuals are often particularly negatively affected by rapidly rising prices.** One reason is their need to spend a higher percentage of their income on necessities, such as food and energy.<sup>3</sup> According to the Bureau of Labor Statistics, on average, higher income households spend less of their after-tax income than do lower income households. Highest-income households spend around 65 percent of after-tax income compared the households in the bottom 20 percent of the income distribution, which spend around 190 percent of their after-tax incomes each year.<sup>4</sup> **Lower-income households typically spend more than they earn by dipping into savings and taking on debt.**

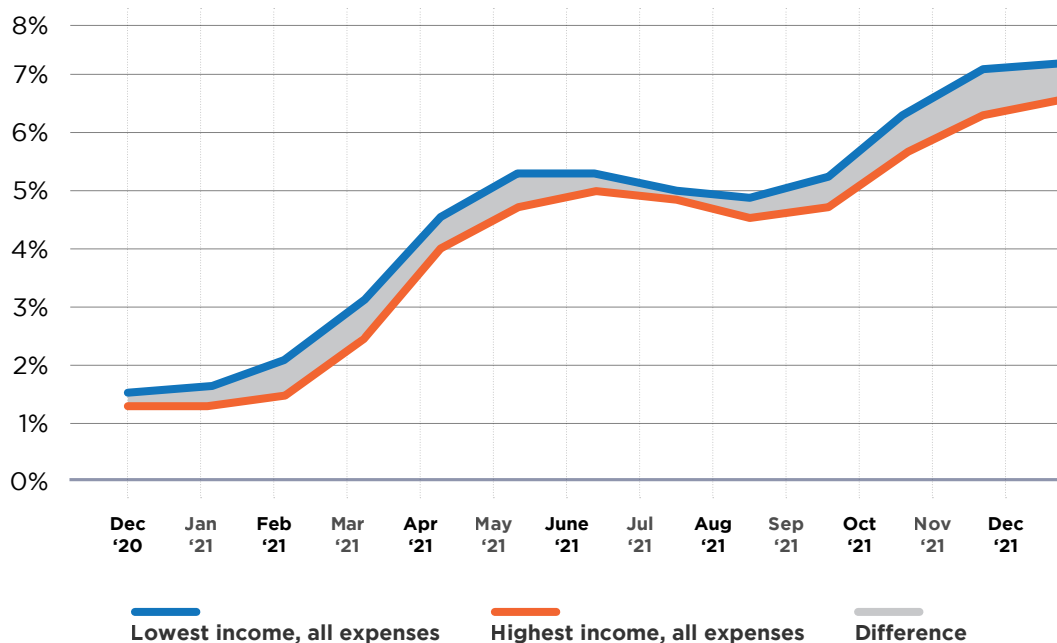
<sup>3</sup> Lin economic terms, "necessities" are characterized as having relatively low price elasticity of demand.

<sup>4</sup> Renter, E. January 25, 2022. "Low- and Middle-Income Earners Stand to Take the Brunt of Inflation -Here's What That Really Means." Market Watch. <https://www.msn.com/en-us/money/careersandeducation/low-and-middle-income-earners-stand-to-take-the-brunt-of-inflation-e2-80-94here-e2-80-99s-what-that-really-means/ar-AAT7k2H>

# TRANSFORMATIVE SHIFTS Observed in 2021

The typical spending patterns of lower income households are different than the spending habits of higher income households. **On average, lower income households spend a relatively greater proportion of their incomes on necessities and less on non-essential<sup>5</sup> goods than do higher-income households.** For example, lowest income households spend around 14 percent of total spending on food, while food accounts for 12 percent of spending among middle-income households and 11 percent of highest income household spending.<sup>6</sup> According the Bureau of Labor Statistics, **food prices rose 6.3 percent over the past year, the steepest year-over-year increase in food prices since 2008.<sup>7</sup>** Spending on utilities by the two lowest-income groups accounts for around 10 percent of all their spending compared to around 8 percent for middle-income households and 5 percent for highest-income households. Energy prices have increased around 10 percent over the past year, disproportionately affecting lowest-income households. **Figure 2** takes spending patterns by income group into account to calculate the gap in felt inflation between high- and low-income groups. The analysis finds that inflation experienced by low-income households in 2021 was 7.2 percent while **inflation experienced by high-income households was 6.6 percent.<sup>8</sup>**

Figure 2: **Inflation Gap Between High- and Low-Income Households**  
Source: J. Orchard, 2022



<sup>5</sup> In economic terms, “non-essential goods” are characterized as having relatively high price elasticity of demand.

<sup>6,7</sup> Renter, E. January 25, 2022. “Low- and Middle-Income Earners Stand to Take the Brunt of Inflation- Here’s What That Really Means.” Market Watch. <https://www.msn.com/en-us/money/careersandeducation/low-and-middle-income-earners-stand-to-take-the-brunt-of-inflation-e2-80-94here-e2-80-99s-what-that-really-means/ar-AAT7k2H>

<sup>8</sup> Orchard, J. January 13, 2022. “Inflation Inequality: Poorest Americans are hit Hardest by Soaring Prices on Necessities.” The Conversation. <https://theconversation.com/inflation-inequality-poorest-americans-are-hit-hardest-by-soaring-prices-on-necessities-174853>



# TRANSFORMATIVE SHIFTS Observed in 2021

Additionally, **inflation has a bigger impact on those who rely on cash instead of investing in real estate, stocks, or bonds.** Compared to other income groups, low-income households find it relatively difficult to own their own home. With real estate ownership providing one of the most effective hedges against inflation, low-income households do not have the same opportunity as do higher income households to protect against the negative wealth effects of inflation. **Lower income households often hold a larger portion of their wealth in the form of cash balances than do higher income households. Cash balances are relatively unprotected against the negative effects of inflation on purchasing power compared to more sophisticated forms of holding wealth such as stocks and bonds.**

**Another issue with inflation deals with how the monetary authority responds to inflation. A deflationary policy that is not well planned and executed can subsequently lead to recession.**

If the Federal Reserve raises interest rates gradually, inflation will eventually decrease but will likely do so slowly. However, if the Federal Reserve tightens monetary policy too fast and by too much, aggregate demand in the economy may decrease in a way that results in output and employment losses. This would have the potential to significantly slow or even reverse the economic recovery from the COVID-19 pandemic and may lead to recession.

It will be politically unpopular to maintain the current inflationary environment far into the future. However, a recession resulting from a sudden and significant tightening of monetary policy will also be politically disastrous, especially right before election time. National macroeconomic policy changes meant to fight inflation must be careful not to deflate too suddenly or too much or else we could experience an economic downturn that will adversely affect the entire country.



# TRANSFORMATIVE SHIFTS Observed in 2021

In December, the Federal Reserve announced that it is planning to significantly reduce the rate of its monthly bond purchasing and that it could phase out its asset purchase program entirely early next year. This reduction in asset purchases by the Fed represents **a tightening of monetary policy** that will result in less money entering the economy and downward pressure on inflation. In addition, **the Fed announced the strong possibility of raising interest rates in 2022** which represents a further tightening of monetary policy to combat inflation. However, **recent and potential upcoming fiscal policy will be working against this potential change in monetary policy. The bipartisan infrastructure initiative represents a sharp expansion in fiscal policy and will result in a significant injection of money into the economy.** The potential Build Back Better Act also represents expansionary fiscal policy which could apply increasing inflationary pressure.

## Supply Chain Issues

**Supply chain issues hamper economic recovery and apply upward pressure on the general price level.**

When the COVID-19 pandemic hit in early 2020, global supply chains came grinding to a halt as health orders across the globe resulted in a slowdown in production and decreasing inventories. Production shortfalls coupled with low inventories established an environment where even moderate disruptions (additional surges, input shortages, weather disruptions, etc.) can have a substantial impact on global supply chains.

**Additionally, during the pandemic, a significant portion of households found themselves with increased household income related to changed spending habits, stimulus payments, and expanded unemployment benefits.**

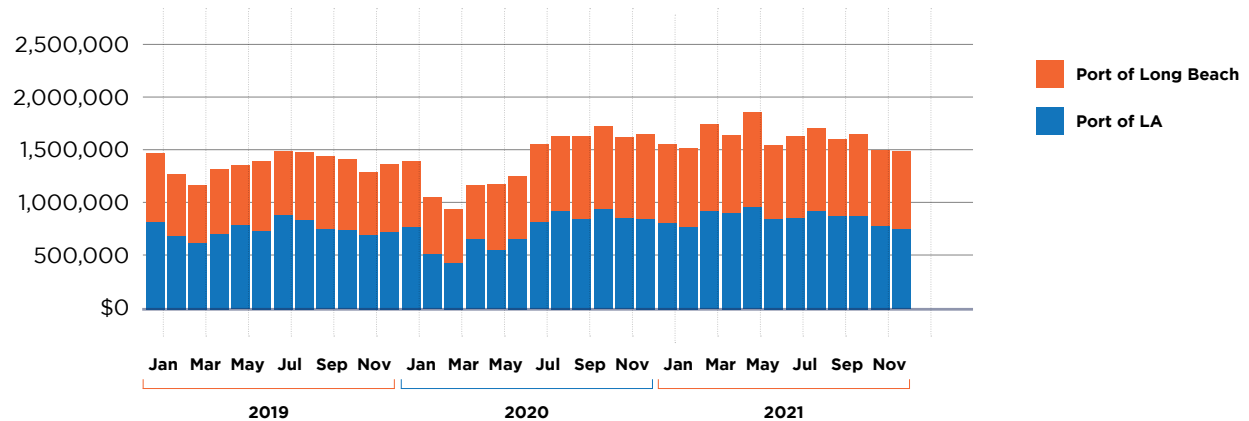
Much of what was previously being spent on commuting to work, going out to eat, and other entertainment and in-person services, now started to be spent on the purchase of goods.



# TRANSFORMATIVE SHIFTS Observed in 2021

Seaports have experienced significant above peak traffic since the economy started recovering from the pandemic. The release of pent-up demand combined with the effects of pandemic restrictions led to a significant increase in demand for goods. The number of containers traveling through the San Pedro Bay Ports (Port of Los Angeles and Port of Long Beach) reached new heights in 2021; both ports set new annual container volume records in 2021.

Figure 3: **Total TEUs by Month, San Pedro Bay Ports**



Supply chain issues negatively affect production for a variety of goods in the economy, affecting economic output, the supply of goods available to consumers, and therefore the prices of these goods. Federal Reserve Chairman Jerome Powell has publicly stated that supply-side issues have been a significant unforeseen factor contributing to the current inflationary environment.<sup>10</sup> **The ability of the U.S. as well as the global economy to effectively overcome supply chain issues in 2022 will be a significant determinant of economic performance and the inflation rate over the coming years.**

While there are reassuring signs of easing supply-side pressure, the state of the supply chain in 2022 is still surrounded by uncertainty. As will be discussed in the Los Angeles County-specific section later in the report, the result of labor negotiations scheduled to take place in mid-2022 at the all-important San Pedro Bay Ports will be an important factor that will affect the regional economy's supply-side picture next year.

**With 90 percent of all trade in final and intermediate goods (by tonnage) being transported over the ocean, significant backups at seaports can have a serious effect on the economy.<sup>9</sup>**

9 Varadarajan, T. December 17, 2021. "An Insider Explains the Supply-Chain Crisis." Wall Street Journal. [https://www.wsj.com/articles/insider-explains-supply-chain-crisis-phil-levy-shipping-containers-ports-costs-inflation-logistics-11639757471?mod=opinion\\_lead\\_pos5](https://www.wsj.com/articles/insider-explains-supply-chain-crisis-phil-levy-shipping-containers-ports-costs-inflation-logistics-11639757471?mod=opinion_lead_pos5)

10 Senate Banking Committee. "CARES Act Oversight of Treasury and the Federal Reserve: Building a Resilient Economy." November 30, 2021. The Hill. Youtube video: [https://youtu.be/\\_D97jdDzknk?t=4137](https://youtu.be/_D97jdDzknk?t=4137)



# TRANSFORMATIVE SHIFTS Observed in 2021

## Remote Work

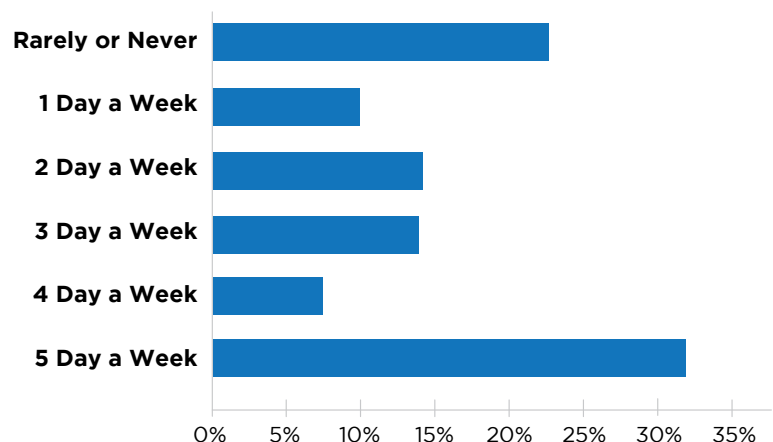
**The shift towards remote work has economy-wide implications that will likely result in significant changes to labor and real estate markets going forward.**

Remote work has allowed many businesses to stay open throughout the pandemic. While initially considered by many to be a temporary measure, many jobs will likely make their shift to remote work permanent or will have hybrid work options in the future.

The transition to remote work has been industry/occupation-specific. A significant number of workers in knowledge-based industries, such as professional and business services, the financial services industry, and the information industry, have transitioned to working remotely from home during the pandemic. Remote work opportunities are not available to workers in service occupations that require close personal interaction or to workers in manual labor occupations.

A recent survey finds that even after the COVID-19 pandemic is under control, workers still express a desire to maintain a hybrid working environment, with 45.3 percent of those surveyed favoring such a model compared to 32.0 percent who want to return to full-time work and 22.7 percent who want to rarely or never return to the office.<sup>11</sup> This may largely be due to the time saved by working from home, 70 minutes on average each day. Workers have used these hours primarily to work more for their job, about 30 minutes per day, but also have spent it on chores and childcare (about 20 minutes per day) and leisure (about 25 minutes per day).

Figure 4:  
**Preferred Number of Days Working From Home**  
Source: Barrero et al., 2021



Among those who are able to work remotely, perspectives seem to correlate with certain demographic characteristics.<sup>12</sup> Hybrid work arrangements were more popular with knowledge workers of color, with Latino (86%), Asian (81%), and Black (81%) knowledge workers preferring a hybrid work situation more than White knowledge workers (75%). As a result, White knowledge workers are spending much more time at the office than their non-White coworkers. Globally, women tend to favor remote work more than men, with 52 percent wanting to work mostly or completely remotely compared to 46 percent of men.

<sup>11</sup> Barrero, J.M., Bloom, N., & Davis, S. J. (2021). Why working from home will stick. (National Bureau of Economic Research Working Paper No. 28731). National Bureau of Economic Research.

<sup>12</sup> Future Forum. (2022, January). Leveling the playing field in the hybrid workplace. Future Forum by Slack. <https://futureforum.com/wp-content/uploads/2022/01/Future-Forum-Pulse-Report-January-2022.pdf>

# TRANSFORMATIVE SHIFTS Observed in 2021

While women with children valued flexible options more than men with children, both did so more than workers without children. Additionally, executives, who tend to be White and male,<sup>13</sup> tend to desire a return to the office more than employees, with 42 percent spending most of their week working from the office versus 30 percent of employees doing so.

## Labor markets all over the country have been experiencing a reshuffling that is largely pandemic-related.

A “Great Resignation” has taken place with workers leaving their jobs in search of more attractive opportunities. Workers who are looking for jobs consider the entire work compensation package which not only includes monetary wages and salaries but also non-monetary forms of compensation that increase the attractiveness of jobs. **Remote work opportunities may be something that employees in certain occupations may want permanently as a feature of their job.**

Employers who provide this feature will see that more of the total compensation package can be provided in the form of non-pecuniary benefits and less in monetary compensation. In addition, many employers will see remote work as a way to significantly cut costs by saving on rent for office space. **The ability of businesses to offer monetary and nonmonetary compensation that attracts workers back into the labor market will be a significant determinant of what the labor picture will look like in the near future.**

## Remote work effects will also potentially impact household location decisions, service-providing business location choices, real estate asset values, and local government tax revenues.

Remote work effects will encourage some workers to move away from their places of work in search of more affordable areas to live. Not being tied down to a specific jurisdiction for work will result in population shifts as people choose places to live that more closely match their preferences without having to find a new job.

<sup>13</sup> Deloitte. (2021, June). Missing Pieces Report: The Board Diversity Census of Women and Minorities on Fortune 500 Boards, 6th edition. Alliance for Board Diversity. <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/center-for-board-effectiveness/missing-pieces-fortune-500-board-diversity-study-6th-edition-report.pdf>



# TRANSFORMATIVE SHIFTS Observed in 2021

## **Migration to lower cost of living areas affects asset values, business prospects and location decisions, and local government tax revenues.**

Significant changes in the trajectory of demand and supply, and therefore market values for different real estate assets, may materialize as a result of remote work effects.

As more people work remotely, they have the option to leave high cost of living areas for lower cost of living locations. This results in corresponding changes in real estate demand, prices, and future supply. We must therefore consider the effect of new in- and out-migration of people and businesses when predicting future market demand and supply for geographically different real estate markets.

**Housing demand during the pandemic increased for a variety of reasons.** People's cash balances rose as a result of a decline in various forms of spending, which allowed many buyers to make necessary down payments for homes. Furthermore, low mortgage interest rates fueled the demand for housing. In addition, the demand for homes increased as many of these new homeowners were spending much more time at home as leisure opportunities decreased and remote work increased. Furthermore, remote work allowed people to purchase homes in lower cost areas far from their offices.

There will eventually be a return to the office for much of the area's workforce: the extent to which it will occur is difficult to foresee, but it will be a key determinant of demand for office space and therefore market values.





# TRANSFORMATIVE SHIFTS Observed in 2021

**Office real estate will potentially experience a significant change in value as a result of remote work effects.**

Just as residential housing experienced a pandemic-induced increase in demand as workers spent more time working remotely at home that would otherwise have been spent in the office, commercial office space will likely experience a decline in value that may be relatively long-lived. The real question is to what extent this switch to remote work is permanent or merely transitory, decreasing once the pandemic ends.

With workers spending more time at home instead of at the office, businesses previously located near traditional places of work to serve customers who spent much of their day at the office will likely follow customer demand and shift their business locations towards residential areas.

**This shift in demand for business real estate can result in asset value changes for retail and restaurant real estate.**

Finally, the potential shift in population and in business locations will also impact local tax revenues. As people and businesses move due to remote work effects, local governments in jurisdictions from which people and businesses move away will experience declines in tax revenues, while jurisdictions that attract workers and businesses will experience an associated increase in tax revenues.

## Freelance Workers

**The share of the labor force categorized as non-temporary freelancers has increased as high-skilled workers leave conventional full-time work for flexible employment alternatives.**

Around **12 percent** of the U.S. workforce began freelancing for the first time in 2020, right after the pandemic hit.<sup>14</sup> In 2020, freelance work contributed **\$1.2 trillion to the U.S. economy**, a significant increase of **22 percent** since 2019.<sup>15</sup>



<sup>14</sup> Business Wire. 2020. "New Upwork Study Finds 36% of the U.S. Workforce Freelance Amid the COVID-19 Pandemic." <https://www.businesswire.com/news/home/20200915005369/en/New-Upwork-Study-Finds-36-of-the-U.S.-Workforce-Freelance-Amid-the-COVID-19-Pandemic#:~:text=Upwork%E2%80%99s%20seventh%20annual%20study%201%20surveyed%20more%20than,an%20increase%20of%20%20million%20freelancers%20since%202019.>

<sup>15</sup> Ioannou, L. 2020. "A snapshot of the \$1.2 trillion freelance economy in the U.S. in the age of Covid-19." CNBC. <https://www.cnbc.com/2020/09/15/a-snapshot-of-the-1point2-trillion-freelance-economy-in-the-us-in-2020.html>

# TRANSFORMATIVE SHIFTS Observed in 2021

A recent study<sup>16</sup> found that around 59 million U.S. workers performed freelance work in 2021, equaling approximately 36 percent of the United States labor force.<sup>17</sup> Overall, the share of the labor force that is categorized as non-temporary freelancers increased from 33.8 percent to 35.0 percent over the past year. **This growth in the freelance workforce and the resulting earnings has been due in large part to a rise in the number of high-skilled, remote freelancers that left conventional full-time work for flexible employment alternatives.** Freelancing has specifically been attracting high-skilled workers, with 51 percent of post-graduate workers choosing freelancing in 2021, an increase of about 6 percent since 2020. In 2021, about 53 percent of the freelance workforce provided high-skilled services compared to 50 percent in 2020. These services include computer programming, marketing, financial services, and IT services.

Furthermore, remote work was cited as a top reason for entering the freelance workforce, being mentioned by around **54 percent** of new entrants. Top reasons for entering freelance employment cited by new skilled remote entrants include **schedule flexibility (78%)** and **work location flexibility (73%)**.

Freelance work is expected to keep growing over time. Around **56 percent of non-freelance employees** surveyed in the study answered that they are likely to freelance in the future.

## 2020-2021 U.S. Labor Force

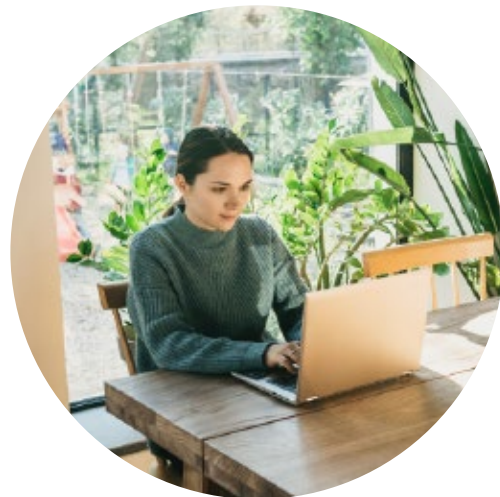


**59 Million U.S. Workers**  
performed freelance work

**33.8% → 35%**

Non-Temporary Freelancers

**Around 68% of 2021's new freelance workforce cite 'career ownership' as a principal reason for choosing to freelance.**



<sup>16</sup> Ozimek, A. Freelance Forward Economist Report. Upwork. <https://www.upwork.com/research/freelance-forward-2021>

<sup>17</sup> Business Wire. 2021. "Upwork Study Finds 59 Million Americans Freelancing Amid Turbulent Labor Market." <https://www.businesswire.com/news/home/20211208005266/en/>

# TRANSFORMATIVE SHIFTS Observed in 2021

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## Increased Digitization

**Increased digitization in the provision of services during the COVID-19 pandemic will likely result in permanent changes in how certain services are provided along with associated cost and labor market implications.**

The COVID-19 pandemic has significantly accelerated the trend towards digitization in the provision of a variety of services. While services such as tax preparation and educational instruction already had an online delivery presence before the COVID-19 pandemic struck, the pandemic served to accelerate the use of online platforms to provide these and other services.



**In particular, the pandemic served as a catalyst for the significantly increased provision of telehealth services.**

Increased digitization will likely result in changes in industries and labor markets and may hold cost implications for the services being provided. Affected service industries will need to create and implement digital platforms that will allow for successful delivery of their services. New demand for digital skills will serve to potentially change the composition of different occupations across different industries and change the pattern of business transactions between traditional suppliers of affected services and businesses that design and maintain digital platforms. Workers providing the types of services that have significantly shifted towards digitization will be required to possess the ability

to effectively offer their services through new digital platforms. Workers accustomed to traditional in-person service delivery may need to be trained to effectively use a variety of online platforms in order to successfully perform their duties in the new digital age for these services.

Increased digitization in the provision of certain services will likely affect the costs of these services and therefore prices to consumers and resulting quantity demanded. The potential for lowered costs, particularly in services such as health care that have been rising over time, represents a likely benefit of increased digitization.



# TRANSFORMATIVE SHIFTS Observed in 2021

## Accelerated Shift to E-Commerce

**The COVID-19 pandemic has accelerated the pre-pandemic shift towards e-commerce and away from brick-and-mortar establishments.**

Potentially permanent consumer behavioral shifts have taken place since the pandemic hit that have moved consumption patterns away from brick-and-mortar businesses, particularly small businesses with no online presence, and towards e-commerce. Some of the jobs that have been lost by brick-and-mortar establishments will be recovered. However, others may not.

**This shift in consumer behavior will result in a labor market transition.**

A relative increase in e-commerce related jobs, such as warehousing and delivery, can be expected. On the other hand, a relative decrease in brick-and-mortar jobs, particularly in retail, may result. It remains to be seen how many of these lost brick-and-mortar jobs will return, as it will heavily depend on whether the nature of consumer demand shifts are transitory or permanent.

Shifting consumer preferences will create more employment opportunities in some industries and fewer in others. Many workers formerly employed in brick-and-mortar operations have transferable skills and will eventually shift to newly created jobs related to e-commerce.

The mechanisms by which employee transition to new jobs occur will be important in determining the speed at which these job shifts take place. Furthermore, potential future changes in the method by which small firms conduct business may take place as a result in consumer demand shifts.



**Small businesses may find that creating or expanding an online presence may be necessary in the new e-commerce age.**

Many small businesses seeking to expand their operations into e-commerce will have to become familiar with technology and e-commerce business principles. This will in turn increase demand for the types of goods and services that will be demanded by small businesses seeking to enter the world of e-commerce, leading to further industry shifts.

# TRANSFORMATIVE SHIFTS Observed in 2021

## Looking Forward

**Continued vaccination and boosting against COVID-19 continues to be an important step to returning to normalcy. Uncertainty remains regarding the current vaccine's effectiveness against Omicron and other potential future variants, and private and public sector behavioral responses to future COVID-19 developments.**

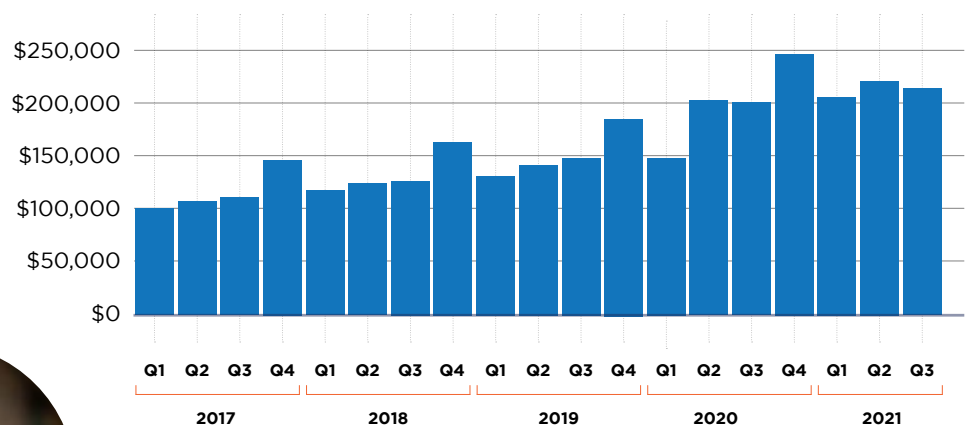
The arrival of the Omicron and potential new virus variants and the ability of the currently available vaccines and booster regime to protect the population against new variants cannot be perfectly predicted and can interrupt or potentially reverse economic recovery. It remains to be seen how many residents will get boosted, which will likely be a significant determinate of future virus case numbers.

**Future individual, organizational, and governmental responses to the pandemic are uncertain and will determine the extent of the recovery and the form that the recovery will take.**

There is reason for optimism in 2022. Regarding COVID-19 treatment, the FDA recently authorized Pfizer and Merck's COVID-19 antiviral pills which represent the first authorized home COVID-19 treatments in the United States. Individuals are learning to live with the virus and are slowly returning to everyday pre-pandemic life. However, significant shifts have occurred as a result of the pandemic that are unlikely to be reversed and will lead to a "new normal."



Figure 5:  
**Estimated Quarterly U.S. E-Commerce Sales**  
*Not Adjusted*



# THE UNITED STATES

2021 was characterized by expansionary fiscal and monetary policy, increasing vaccination numbers, and the lifting of pandemic-related restrictions. As a result, the U.S. economy significantly recovered in 2021, although important economic indicators still remain below their pre-pandemic levels. However, the economy experienced the highest rate of inflation since 1982 and COVID-19 concerns remain, with the new Omicron variant injecting significant uncertainty into the recovery.

The nation is in the process of recovering from a severe economic downturn caused by the COVID-19 pandemic in 2020. The federal government has enacted demand-stimulating combined fiscal and monetary policy throughout the COVID-19 pandemic in an attempt to support economic recovery. However, these expansionary macroeconomic policies have been principal causes of significant recent price inflation.

Figure 6: **United States Headline Statistics and Forecast**

	2017	2018	2019	2020	2021f	2022f	2023f
<b>Real GDP Growth</b>	2.7%	2.3%	2.6%	-2.3%	5.7%	3.6%	2.4%
<b>Real Personal Income Growth</b>	3.4%	3.3%	1.3%	3.4%	2.1%	-1.9%	2.6%
<b>Total Employment Growth</b>	1.6%	1.6%	1.4%	-5.7%	2.9%	3.3%	1.3%
<b>Unemployment Rate</b>	4.4%	3.9%	3.7%	8.1%	5.3%	3.9%	3.6%
<b>CPI</b>	2.1%	2.4%	1.8%	1.2%	7.0%	4.4%	2.7%

**The consumer price index rose significantly in 2021 as a result of loose monetary policy, expansionary fiscal policy, and the release of pent-up demand for goods, travel, live entertainment, and large events.**

**The rate of inflation rose to 7.0 percent in 2021, representing the highest inflation rate since 1982.** In 2021, U.S. GDP increased at a real annualized rate of 6.4 percent in the first quarter, 6.7 percent in the second quarter, and an estimated 2.3 percent in the third quarter.<sup>18</sup> The overall size of the nation's economy in terms of GDP exceeded pre-pandemic levels in the second quarter of 2021, marking a substantial recovery from the 2020 pandemic-induced recession.

## Rate of Inflation

 **7.0%**

## Annualized Percent Change in U.S. GDP, 2021

↑ **6.4%**  
in Q1

↑ **6.7%**  
in Q2

↑ **2.3%**  
in Q3

<sup>18</sup> Bureau of Economic Analysis. "National Income and Product Accounts." <https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>



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**The U.S. labor market was significantly negatively impacted by the pandemic in 2020 but made an impressive recovery in 2021.**

The unemployment rate, which began 2021 at around **6.3 percent**, improved significantly during the year falling to **3.9 percent** in December, which is close to the pre-pandemic 50-year low of **3.5 percent**. According to the U.S. Department of Labor, after losing over 22 million jobs between March 2020 and April 2020, the economy added payrolls in every month in 2021 with over 1 million jobs added in July alone.<sup>19</sup> The **3.9 percent** unemployment rate reached in December 2021 will not likely fall much further.

Although the economy has added a substantial number of jobs in 2021, **employment is still below the February 2020 level**, and job vacancies have increased significantly, hitting record numbers. This development is reflected in the size of the labor force, which is still significantly below the pre-pandemic level. The labor force participation rate is near the lowest it has been since 1977.<sup>20</sup>

The supply side of the labor market has been severely impacted as a result of the COVID-19 pandemic. The U.S. labor market has been experiencing a steady decline in the labor force participation rate since its peak in the late 1990s/early 2000s. However, **the pandemic led to a sudden and significant decline in the labor force participation rate that has been slow to recover**. It remains to be seen whether this shock to the labor market will leave a permanent mark on the trajectory of the labor participation rate or whether the participation rate will recover and approach levels consistent with the pre-COVID-19 trend.

Figure 7: **Quits Rate, Total Nonfarm**  
*Seasonally Adjusted*

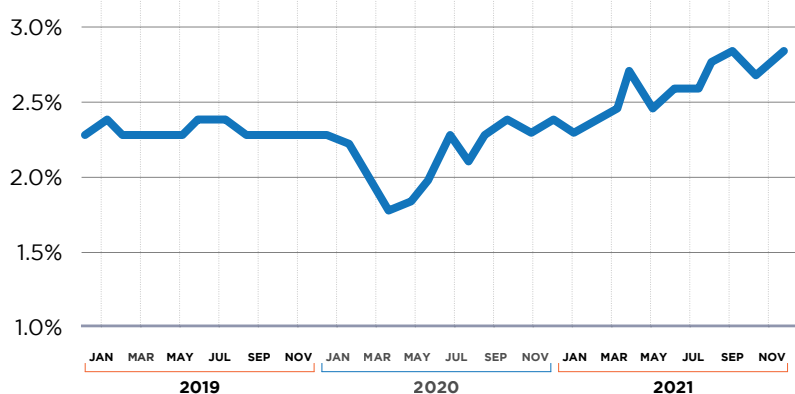
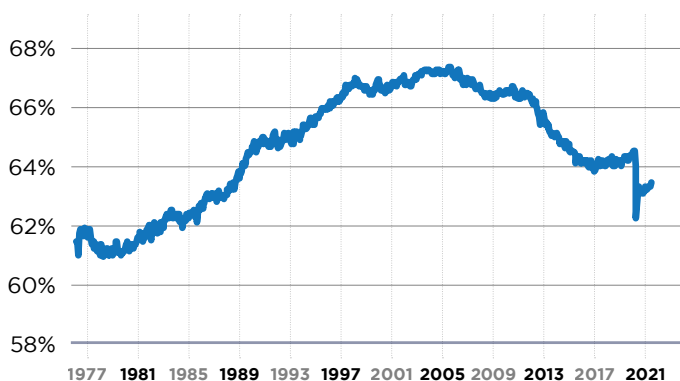


Figure 8: **Labor Force Participation Rate**



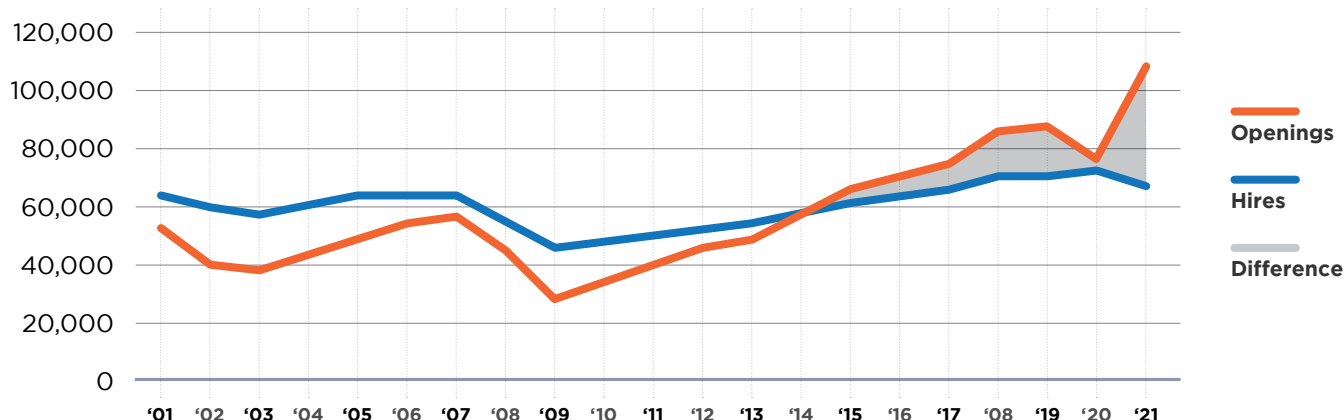
<sup>19</sup> McCormick, E. December 21, 2021. "What happened in the Economy in 2021." Yahoo Finance. <https://news.yahoo.com/what-happened-in-the-economy-in-2021-164815330.html#:~:text=But%20so%20far%2C%20economic%20growth,latest%20estimate%20for%20the%20quarter.>

<sup>20</sup> Ibid

# THE UNITED STATES

The labor force participation rate will be a key metric to watch going forward and will be an important determinant of overall economic performance and future changes in the economy. The labor force participation rate hit 61.9 percent in November and December 2021, which is the highest it has reached during recovery, indicating that workers are returning to the workforce. However, the rate is still at its lowest since 1977. **If workers do not fully return to the labor force in the coming years, the U.S. economy will have to make significant adjustments in response to the new labor picture.**

Figure 9: **Gap Between Job Openings and Hires**



Employee quits rate remained high throughout 2021. The “Great Resignation” of 2021 resulted in an economy-wide quits rate of **3 percent** in November, matching September’s record high rate of **3 percent**.<sup>21</sup> **A record high 4.5 million workers quit their jobs in November.**

2021 was characterized by an extremely tight labor market with a record high number of job openings combined with unprecedented difficulty filling those openings. According to the U.S. Bureau of Labor Statistics, as of November 2021, job openings exceeded 10 million per month for six straight months during 2021.<sup>22</sup> In 2021, the gap between job openings and hires hit an all-time high. Even without

December’s data factored in, 2021’s gap between job openings and hires, which totaled 36,623, was greater than the next two highest years on record combined.<sup>23</sup> In November 2021, the number of hires equaled 6,697, well below the number of job openings which totaled over 10,500. One year earlier, in November 2020, job openings totaled 6,766 while hires equaled around 6,000. The historically high gap between job openings and hires has negatively impacted many businesses, particularly small businesses.<sup>14</sup> According to a recent Goldman Sachs survey, 97 percent of small business owners answered that difficulty hiring is negatively affecting their bottom line.<sup>24</sup>

<sup>21</sup> U.S. Bureau of Labor Statistics, Quits: Total Nonfarm [JTSQUR], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/JTSQUR>

<sup>22</sup> Bureau of Labor Statistics. 2021. “Job Openings, Hires, and Separations Levels, Seasonally Adjusted.” <https://www.bls.gov/charts/job-openings-and-labor-turnover/opening-hire-seps-level.htm>

<sup>23</sup> The two next highest years were 2018 with 16,692 and 2019 with 15,915.

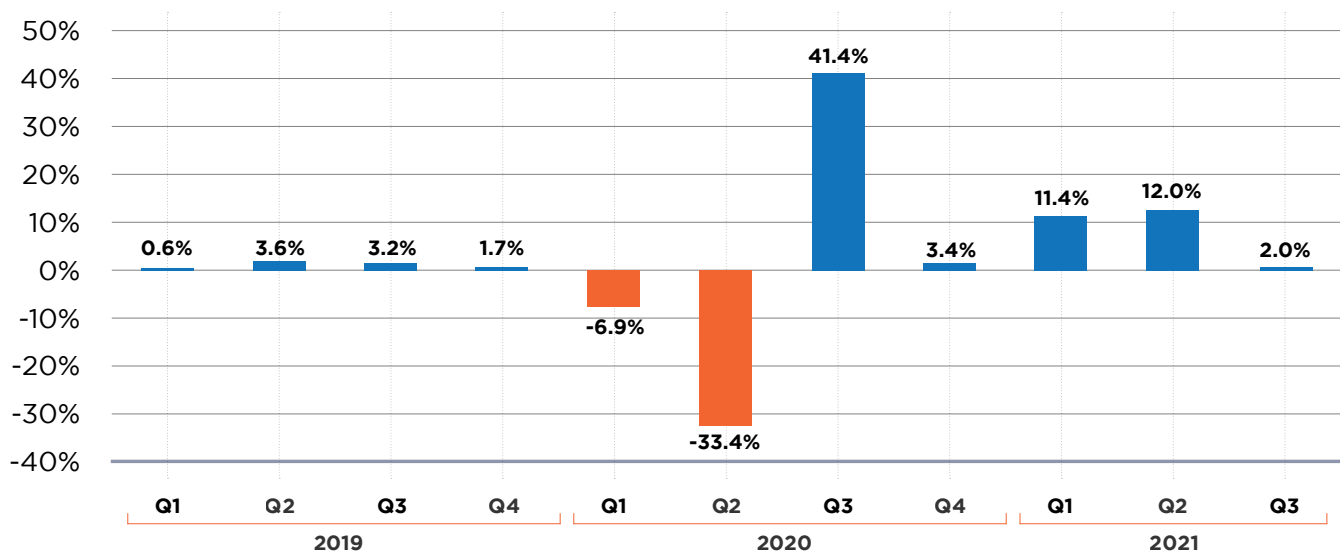
<sup>24</sup> Goldman Sachs. January 2022. “Survey: Small Businesses on the Brink - New Survey Data Shows Omicron Hurting Main Street, Leading Small Business Owners to Overwhelmingly Support Congress Passing Additional Aid.”

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U.S. consumer spending, encouraged by multiple rounds of U.S. government stimulus checks and supplemental unemployment benefits, remained strong in 2021, particularly during the first half of the year. According to the Bureau of Economic Analysis, personal consumption in the United States increased by **11.4 percent** in the first quarter, **12.0 percent** in the second quarter, and a **1.7 percent annualized rise in the third quarter**.<sup>25</sup>



Figure 10: **Percent Change in Real Personal Consumption Expenditures**



The next two years will likely be characterized by economic recovery, the rate of which remains tied to the pandemic as well as to federal monetary policy decisions. Vaccine and booster efficacy against future potential virus variants will be a principal determinant affecting the impact of the COVID-19 virus on future recovery and therefore on whether the recovery forecasts will materialize. In addition, well thought out and executed monetary policy is essential to avoid negatively affecting the economic recovery process as the Federal Reserve plans to attack inflation in 2022.

The consumer price index is expected to rise in the coming years due in large part to recent expansionary fiscal and monetary policy, anticipated release of pent-up demand, and lingering supply chain issues.

<sup>25</sup> Ibid.



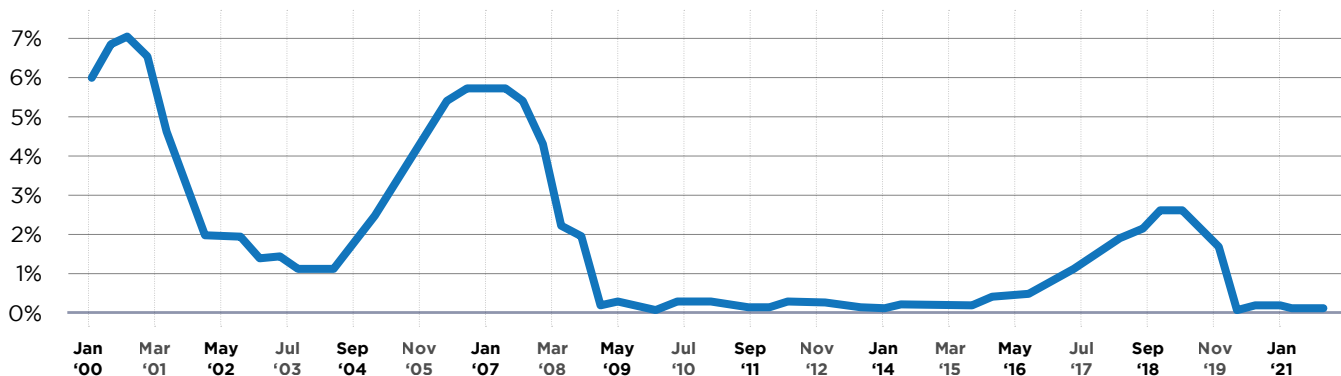
# THE UNITED STATES

## Major Economic Indicators Federal Funds Rate

Since the beginning of the pandemic, the federal funds rate has remained consistently low.

The United States Federal Reserve conducts monetary policy by influencing short-term interest rates and the amount of money and credit circulating in the economy. The three conventional tools that the Fed uses to conduct monetary policy are open market operations, the discount rate, and reserve requirements. By using these tools, **Fed policy triggers a chain of events that impacts the federal funds rate** – the overnight interest rate at which commercial banks lend and borrow excess reserves. Federal funds rate changes affect both short- and long-term interest rates, foreign exchange rates, the money supply, and the level of credit available to borrowers in the economy. In turn, these monetary factors significantly influence employment, prices, and output in the economy.<sup>26</sup>

Figure 11: **Federal Funds Rate 2000-2021**



Lowering the federal funds rate represents expansionary monetary policy and is often a lever used by monetary authorities during economic downturns. As shown in Figure 11, over the past twenty years, the federal funds rate has intentionally been reduced by the Fed during periods of economic recession in order to try and stimulate the economy. During the dot-com recession in the early 2000's, the Great Recession of 2008, and the current pandemic-induced downturn, the Federal Reserve has significantly lowered the federal funds rate. When the federal funds

rate is lowered, liquidity in the economy increases with the goal of stimulating economic activity to increase output and employment.<sup>27</sup> Since April 2020, the federal fund rate has remained consistently low, between **.05 and .10 percent**. In an effort to fight inflation, the Federal Reserve has announced a tightening of monetary policy in 2022. In its December 2021 policy statement, the Fed announced that it expects to increase the fed funds rate three times in quarter-point increments next year. The fed funds rate is expected to rise to **2.1 percent** by the end of 2024.<sup>28</sup>

<sup>26</sup> Board of Governors of the Federal Reserve System. <https://www.federalreserve.gov/monetarypolicy/fomc.htm>.

<sup>27</sup> Federal Reserve issues FOMC statement. Board of Governors of the Federal Reserve System. <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm>.

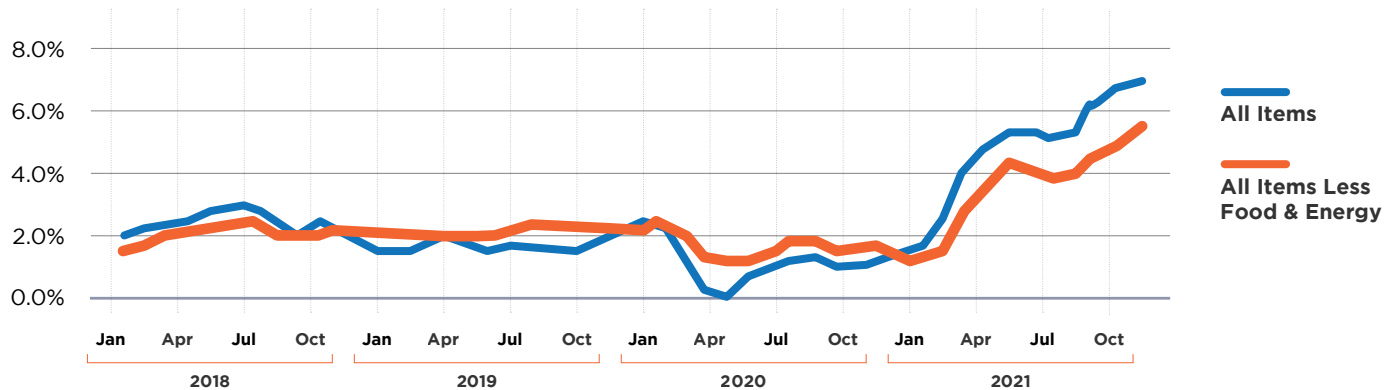
<sup>28</sup> Smialek, J. December 15, 2021. "Fed Shifts to Inflation Battle, Winding Down Pandemic Support." New York Times. <https://www.nytimes.com/2021/12/15/business/economy/inflation-fed-fomc-meeting-december-2021.html>

# THE UNITED STATES

## Major Economic Indicators

### Inflation Rate

Figure 12: **Over-the-year Percent Change in CPI-U**



The one-year percentage change in the Consumer Price Index (CPI) from December 2020 to December 2021 was 7.0 percent. This rise represents the sharpest increase in the CPI since the summer of 1982. **Energy is the major category experiencing a significant increase in prices**, rising around 33 percent over the one-year period. Within the energy category, the energy commodities category has risen in price almost 58 percent over the past year.<sup>29</sup>

Price inflation at the moment is the result of a variety of factors, most of which are connected to the COVID-19 pandemic and post-COVID-19 adjustments. The dominant cause of every historical persisting price inflation has been an increasing money supply relative to aggregate production. The federal government's demand-stimulating combined fiscal and monetary policy during the COVID-19 pandemic has been the principal cause of the recent price inflation. For example, the American Rescue Plan served to inject a significant amount of money into the economy. In

addition, the federal government's earlier stimulus check policy injected hundreds of billions of dollars into the economy which eventually worked their way through the economic system contributing to higher prices. In terms of monetary policy, the Federal Reserve has maintained a loose monetary policy environment throughout the pandemic, releasing a significant amount of money and credit into the economy. **Throughout 2021, economic output did not keep pace with the money supply increase, resulting in a significant increase in the general level of prices.**

<sup>29</sup> U.S. Bureau of Labor Statistics. "Consumer Price Index." <https://www.bls.gov/cpi/>

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**Global supply chain issues and their effects on production have impacted the supply of goods available to consumers, and therefore prices, exerting inflationary pressure.** All else equal, fewer goods combined with an increased quantity of money will apply upward pressure on the general price level.

Finally, **the general release of pent-up demand in the economy has applied upward pressure on the prices for certain goods and services.** People's cash balances rose as a result of a decline in various forms of spending during the pandemic. We are now seeing much of those accumulated cash balances being spent and applying upward pressure on prices.

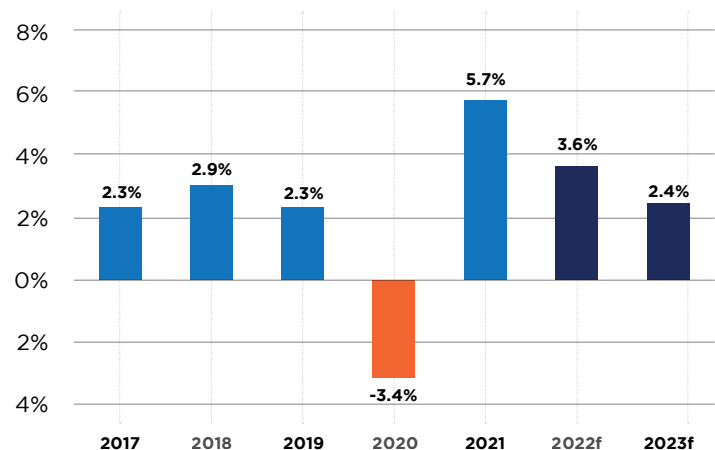


## Real Gross Domestic Product

Real gross domestic product (GDP) fell **3.4 percent in 2020** as a response to the pandemic, as important industries such as leisure and hospitality and the entertainment sector closed their doors. Other industries remained operational, but restrictions on business constrained their output.

In 2021, U.S. real gross domestic product increased at a rate of **5.7 percent**, the fastest growth since 1984. The overall size of the nation's economy in terms of GDP exceeded pre-pandemic levels in the second quarter of 2021, marking a substantial recovery from the 2020 pandemic-induced recession. In 2022, it is projected that the growth of the previous year will continue, albeit at a slightly lower rate of **3.6 percent**. This growth will continue into 2023, at a level similar to that of the pre-pandemic years.

Figure 13: **United States Real Growth GDP by Year**





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## The Stock Market

The strong performance of the stock market throughout the pandemic indicates that investor confidence in the economic future remains high.

Figure 14: **Dow Jones Industrial Average**



Securities markets serve as leading economic indicators that provide insight into expected future economic conditions. Economic indicators such as the **Dow Jones Industrial Average (DJIA)** and the **S&P 500** have performed well throughout the pandemic, reaching record highs in both 2020 and 2021.

The DJIA is a stock market index that tracks 30 large publicly owned companies that significantly contribute to the U.S. economy. The performance of the DJIA is commonly used to measure current and future expected economic health. Before the pandemic hit, the **DJIA reached a local peak of 29,551 points** on February 12, 2020. As shown in Figure 14, the DJIA **fell by 37 percent to 18,592 points** on March 23, 2020, largely the result of uncertainty surrounding the impact of the pandemic on the economy.

Figure 15: **S&P 500 Index**



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The S&P 500 is an index made up of just over 500 common stocks issued by large-cap, publicly traded companies. The S&P 500 performed similarly to the DJIA in the first quarter of 2020. As can be seen in Figure 15, between February 19th and March 23rd, the S&P 500 fell by around 34 percent. **In early January 2021, both the DJIA and S&P 500 indices surpassed their pre-pandemic highs.** In 2021, both indices reached historic highs with the DJIA increasing in value by around 19 percent and the S&P 500 increasing in value by over 27 percent. The strong performance of equity indicators allows us to cautiously make a number of economic inferences. The stock market is fundamentally forward-looking, pricing in future expected discounted cash flows to arrive at stock valuations.

**The strong recent performance of stocks indicates that investor confidence in the economic future remains high and that a full recovery in the near future (at least for large corporations) is probable.**

However, small businesses will likely experience a different recovery trajectory

than large corporations. Small businesses are more likely than large corporations to be liquidity constrained and are more likely to be in the types of industries that are characterized by in-person service provision that have been significantly negatively affected by the pandemic.

## Consumer Sentiment

**Consumer sentiment dropped substantially as a result of COVID-19 and remains low due to the uncertain future of the pandemic and relatively high inflation.**

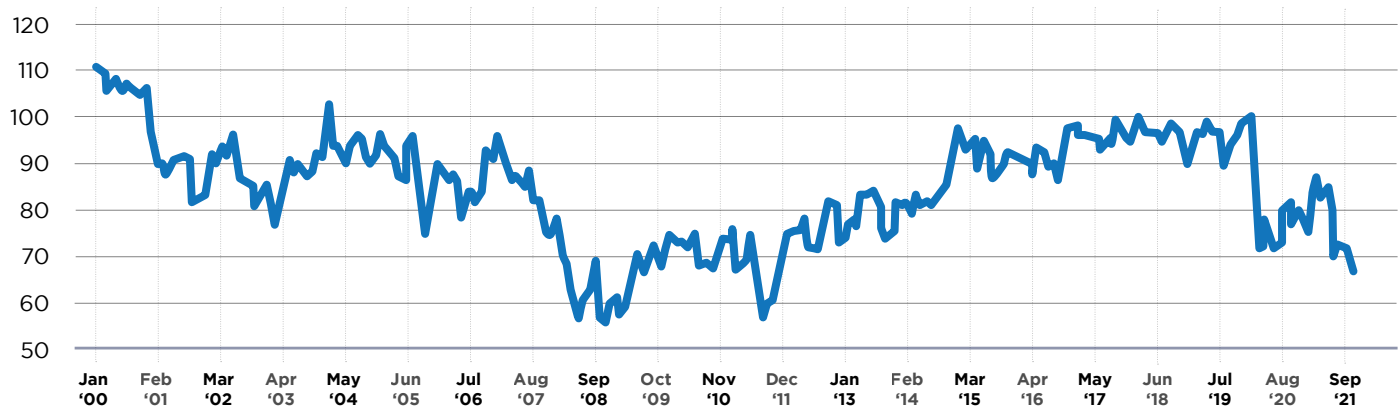
The University of Michigan Consumer Sentiment Index provides information about U.S. households' expectations regarding the state of the nation's economy. A monthly survey is sent out to households across the United States in order to measure changes in attitudes concerning personal finances, business conditions, and consumer purchases. Figure 16 tracks the Consumer Sentiment Index over the 2000-2021 period.

Although the substantial decline in consumer sentiment following the COVID-19 pandemic was less pronounced than the drop following the 2008 financial crisis, it was significantly more sudden. Consumer sentiment began trending upwards in the summer of 2020 before taking another sudden drop in August 2021. The late summer drop in consumer sentiment in 2021 is somewhat surprising when we consider the relatively strong economic performance of 2020. The U.S. added a significant number of jobs, unemployment has declined significantly and is approaching pre-pandemic levels, and wages are rising. However, the pandemic is still negatively affecting consumer confidence. In addition, relatively high inflation has likely contributed to souring consumer expectations of what the economic future holds.



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Figure 16: **Consumer Sentiment Index 2000 to 2021**  
(1966: Q1=100)



## Consumer Spending

**Consumer spending increased substantially in 2021. However, spending slowed significantly during the second half of the year.**

In 2020, the arrival of COVID-19 to the United States resulted in mandated businesses closures, stay-at-home orders, and fear and uncertainty, leading to a **32.4 percent** drop in total consumer spending from January to the end of March.<sup>30</sup> However, not all industries were affected evenly. Over the same period, spending in entertainment and recreation declined by **72.6 percent**, spending in restaurants and hotels fell by **66.6 percent**, and retail spending dropped by **24 percent**.

Consumer spending on groceries, on the other hand, rose by **7.8 percent** as many individuals prepared to potentially isolate for long periods of time.<sup>31</sup> In addition, the fall in consumer spending was unevenly spread across income levels. During the period beginning in January 2020 and ending March 30, 2020, high-income consumers reduced spending by **36 percent**, middle-income consumers reduced spending by **31.2 percent**, and low-income consumers reduced spending by **28.7 percent**.<sup>32</sup> This is partially due to the types of goods and services consumed by consumers of different income levels. On average, compared to lower income consumers, higher income consumers spend a larger portion of their income on goods and services considered relatively non-essential,<sup>33</sup> such as entertainment, restaurant dining, and travel. These goods and services often require a significant amount of in-person interaction to consume and are offered in many of the industries that experienced the most significant pandemic-induced declines in consumer spending and employment. On the other hand, low-income consumers usually spend a larger portion of their incomes on goods that are considered relatively essential such as food from grocery stores, water, electricity, and gasoline.

<sup>30</sup> & <sup>31</sup> "The Economic Tracker." Accessed December 24, 2021. <https://tracktherecovery.org/>.

<sup>32</sup> Ibid.

<sup>33</sup> In economic terms, "non-essential" goods are measured as having relatively high price elasticity of demand while goods deemed "essential" are characterized as having low price elasticity of demand.



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Total consumer spending has increased around **25 percent** compared to January 2020.<sup>34</sup> By the end of 2020, spending recovered to around the same level that existed in January of that year. In 2021, total consumer spending continued its significant recovery, increasing by almost **25 percent** compared to the end of 2020.<sup>35</sup> Consumer spending in the hardest-hit industries has recovered substantially in 2021 compared to January 2020.

Spending on restaurants and hotels has risen by over **18 percent** and retail spending has increased well over **30 percent** compared to January 2020 levels. Spending on entertainment and recreation was characterized by frequent fluctuations throughout 2021 but has also recovered significantly since the depths of the COVID-19-induced downturn. However, spending on entertainment and recreation has not recovered as smoothly and substantially as other hard-hit industries have.

High- and middle-income consumers have increased spending by around **24 percent** and low-income consumers have increased spending by almost **28 percent** compared to January 2020 levels.<sup>36</sup> Personal consumption increased by **11.4 percent** in the first quarter of 2021, **12.0 percent** in the second quarter, and a **1.7 percent** annualized rise in the third quarter.<sup>37</sup> Spending continued to slow in the fourth quarter in large part due to the Omicron variant.

Figure 17: **Change in Consumer Spending from January 2020**  
*Seasonally Adjusted*



Restaurant & Hotel Spendings  
**Increased 18%**



Retail Spendings  
**Increased over 30%**

<sup>34</sup> "The Economic Tracker." Accessed December 24, 2021. <https://tracktherecovery.org/>.

<sup>35</sup> U.S. Bureau of Economic Analysis, Personal Consumption Expenditures [PCE], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/PCE>, December 24, 2021.

<sup>36</sup> & <sup>37</sup> Ibid.

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## Employment

Employment in the U.S. has significantly recovered since the pandemic-induced downturn in 2020. However, although the economy added a substantial number of jobs, job vacancies have increased dramatically. The size of the labor force is still significantly below the pre-pandemic level with the labor force participation rate near the lowest it has been since the 1970s.

The COVID-19 pandemic significantly reduced employment across the United States during the period March through May 2020. On April 15, 2020, employment decreased by over **23 percent** compared to January 2020.<sup>38</sup> Employment in the U.S. has significantly recovered since the pandemic-induced downturn, increasing to just slightly below January 2020 levels by mid-2021. According to the U.S. Department of Labor, after losing over

22 million jobs between March 2020 and April 2020, the economy added payrolls in every month in 2021 with over 1 million jobs added in July alone.<sup>39</sup> The unemployment rate, which began 2021 at around **6.3 percent**, improved significantly during the year, falling to **3.9 percent** in December. However, the unemployment rate is still above the pre-pandemic 50-year low of **3.5 percent** that stood in February 2020.<sup>40</sup>

Figure 18: **Year-Over-Year Percent Change in Nonfarm Employment**

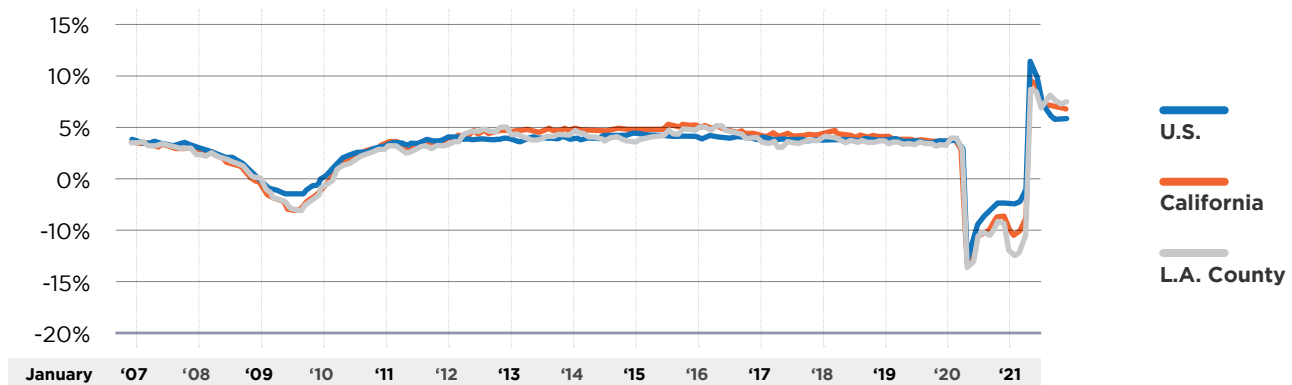


Figure 18 displays the year-over-year percent changes in nonfarm employment for the United States, California, and Los Angeles County since 2000. Employment changes are shown year-over-year to control for potential seasonality effects. Comparing April 2019 to April 2020, nonfarm employment **fell by 13.37 percent in the U.S., 13.56 percent in California, and 13.82 percent in Los Angeles County.**

Considering year-over-year percentage changes in nonfarm employment, the U.S. as a whole added jobs faster than both California and Los Angeles in 2020 as well as during the first half of 2021. However, during the second half of 2021, California and Los Angeles County have added jobs faster than the U.S. has, with Los Angeles County also adding jobs at a higher rate than California as a whole.

<sup>38</sup> "The Economic Tracker." Accessed December 29, 2021. <https://tracktherecovery.org/>.

<sup>39</sup> & <sup>40</sup> McCormick, E. December 21, 2021. "What happened in the Economy in 2021."

Yahoo Finance. <https://news.yahoo.com/what-happened-in-the-economy-in-2021-164815330.html#:~:text=But%20so%20far%2C%20economic%20growth,latest%20estimate%20for%20the%20quarter.>

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**While no industry remained unaffected by COVID-19, the leisure and hospitality industry was among the hardest hit.**

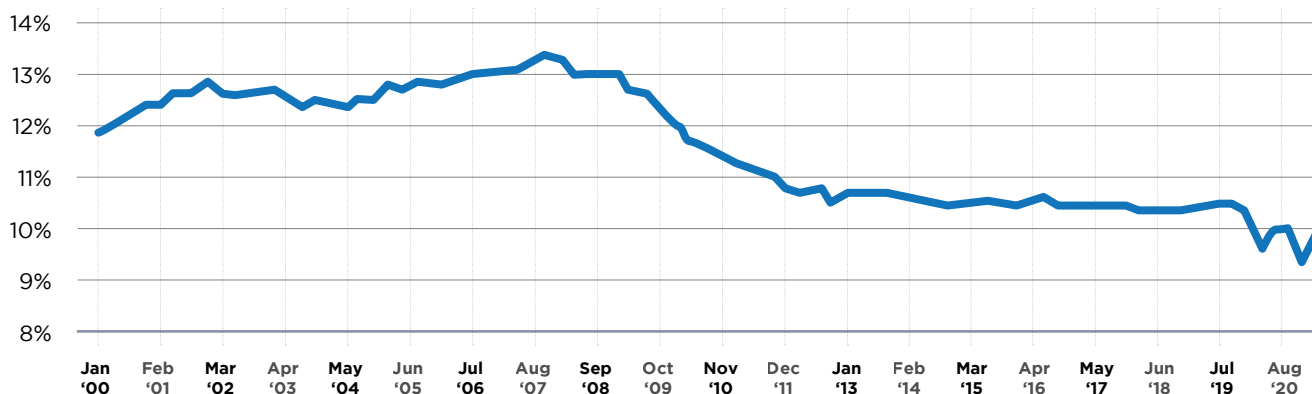
Restrictive public health orders combined with restrictions on non-essential travel led international and domestic tourism to all but dry up. As a result, many hotel and restaurants employees soon found themselves out of work. By April 15, 2020, the leisure and hospitality industry experienced a **55 percent drop in employment** compared to January 2020 levels. Since the depths of the pandemic, the leisure and hospitality industry has experienced a significant recovery. Employment in the industry increased to **8 percent below the January 2020 level by July 2021.**

However, employment challenges remain. Although the economy added a substantial number of jobs in 2021, job vacancies have increased significantly, hitting record numbers. This development is reflected in the size of the labor force, which is still significantly below the pre-pandemic level. The labor force participation rate is near the lowest it has been since 1977.<sup>41</sup>

## Household Debt Payments and Disposable Income

**Household debt payments as a percent of disposable income has remained below the pre-pandemic level. After a substantial spike, real disposable income per capita has declined significantly and is now just above the pre-pandemic level.**

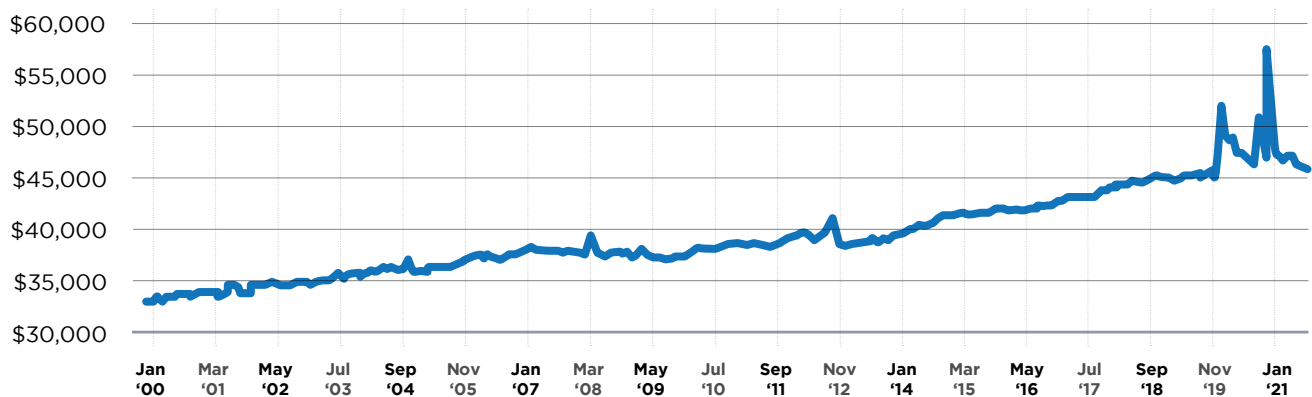
Figure 19: **Household Debt Service Payments as a Percent of Personal Disposable Income**



<sup>41</sup>Ibid.

# THE UNITED STATES

Figure 20: **Real Disposable Income Per Capita**  
(Chained \$2012, Seasonally adjusted annual rate)



Household **debt payments represented around 9.8 percent of disposable income** at the beginning of 2020 before the pandemic struck. This figure dropped to 8.8 percent in April 2020 as interest rates were lowered as the result of expansionary monetary policy. Furthermore, the **Coronavirus Aid, Relief, and Economic Security (CARES) Act granted the right to mortgage forbearance for many homeowners.** The decrease in interest owed and participation in forbearance programs reduced debt payments throughout the U.S. economy. Figure 19 shows that the ratio has remained below the pre-pandemic level **reaching 8.4 percent in January 2021 and 9.18 percent in March 2021.**

Real disposable income per capita increased dramatically in the months following the onset of the pandemic. **This spike is largely due to the impact of the economic stimulus provided by the CARES act and the increase in unemployment benefits paid out in early months of the pandemic.** The disproportionate loss of low-income jobs that took place after the pandemic-induced downturn may have also contributed to this observed spike as measured per capita income was higher than it would have been otherwise. After the spike, real disposable income per capita has declined significantly and is now just above the pre-pandemic level.





# THE UNITED STATES

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## Looking Forward

**National macroeconomic policy will be a principal determinant of economic performance over the next two years.**

The U.S. economy is still recovering from one of the most drastic economic downturns in our nation's history. Future pandemic-related developments are difficult to predict and have the potential to severely disrupt the economy once again.

**The Federal Reserve is at a critical juncture where it must skillfully plan and execute monetary policy to control inflation while also avoiding a significant slowdown or even reversal in our economic recovery.**

The Federal Reserve has announced that it is planning to significantly reduce the rate of its monthly bond purchasing as well as to raise interest rates in 2022. This change in Fed policy represents a significant tightening of monetary policy designed to apply downward pressure on inflation. However, care must be taken not to tighten monetary policy in a way that will disrupt the ongoing economic recovery. Furthermore, if pandemic-related developments take a negative turn in the future, significant tightening of monetary policy may reduce the economy's ability to avoid a subsequent downturn.



# CALIFORNIA

**While California significantly recovered from the pandemic-induced downturn in 2021, significant challenges remain. The pandemic is still negatively impacting the state's economy, particularly industries that rely on high degrees of in-person interaction. Additionally, the high cost of housing, relocation of businesses to other states, and relatively high degree income inequality, represent continuing challenges for California.**

California has been severely negatively impacted by the COVID-19 pandemic. The pandemic-induced downturn negatively impacted California's economic performance significantly in 2020; the mandated business closures and fall in consumer spending resulted in a significant decrease in economic output and an unprecedented employment decline in the first half of 2020, particularly in industries considered non-essential that require high degrees of personal contact.

By the end of 2021, the golden state recorded well over 5 million total Coronavirus cases, almost one million more cases than in Texas, the state with the second highest number of cases. The year 2021 was characterized by a significant recovery in California's labor force participation rate, a substantial decrease in the state's unemployment rate, and a recovery in labor force and employment figures. While recovery has taken place since the depths of the pandemic, these metrics have still not reached their pre-pandemic levels.

Figure 21: **California Headline Statistics and Forecast**

	2017	2018	2019	2020	2021f	2022f	2023f
<b>Real GDP Growth</b>	4.7%	4.0%	3.6%	-2.8%	6.7%	4.2%	2.7%
<b>Real Personal Income Growth</b>	1.5%	1.8%	3.9%	7.0%	2.1%	-1.9%	2.3%
<b>Total Employment Growth</b>	2.3%	1.8%	1.4%	-9.3%	6.0%	2.9%	1.4%
<b>Unemployment Rate</b>	4.8%	4.3%	4.2%	10.2%	7.7%	5.7%	4.6%

While California has significantly recovered from the pandemic-induced downturn, significant challenges remain. The pandemic is still negatively affecting the state's economy, particularly in industries that rely on high degrees on in-person interaction, and continuing to inject uncertainty into the recovery process. Throughout the pandemic, California has experienced its first recorded decline in population since recording began over 100 years ago. In addition, business headquarters have left the state at a record pace during the pandemic. Furthermore, the pandemic significantly impacted California's housing market.

Home prices increased dramatically throughout California during the pandemic. California's housing market remains significantly more expensive compared to housing markets throughout much of the United States. California's continued recovery in the years to come will depend on a variety of factors including national and state economic policy and new developments related to the pandemic. Additionally, the housing market, relocation of businesses to other states, and relatively high degree income inequality, pose continuing challenges for the state that have only been aggravated by the pandemic.

# CALIFORNIA

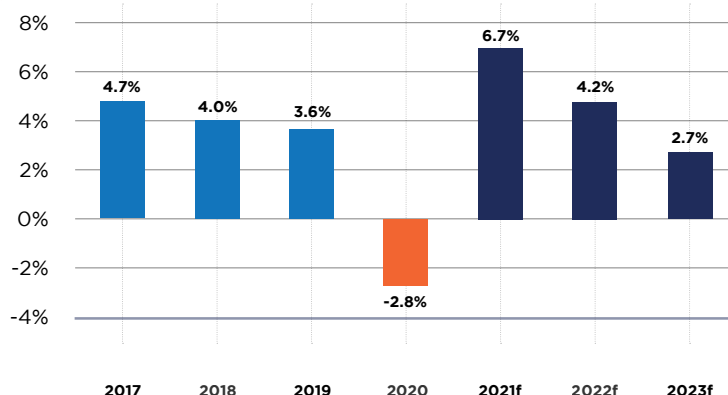
## Major Economic Indicators

### Real Gross State Product

Due to the economic and employment challenges of the pandemic, the real gross state product of California dropped **2.8 percent year-over-year in 2020**.

In 2021, as the state moved through the recovery process, the gross state product is expected to have grown by **6.7 percent**, and is projected to continue growing, albeit at progressively lower rates, over the next two years.

Figure 22: **California Real Growth GSP by Year**



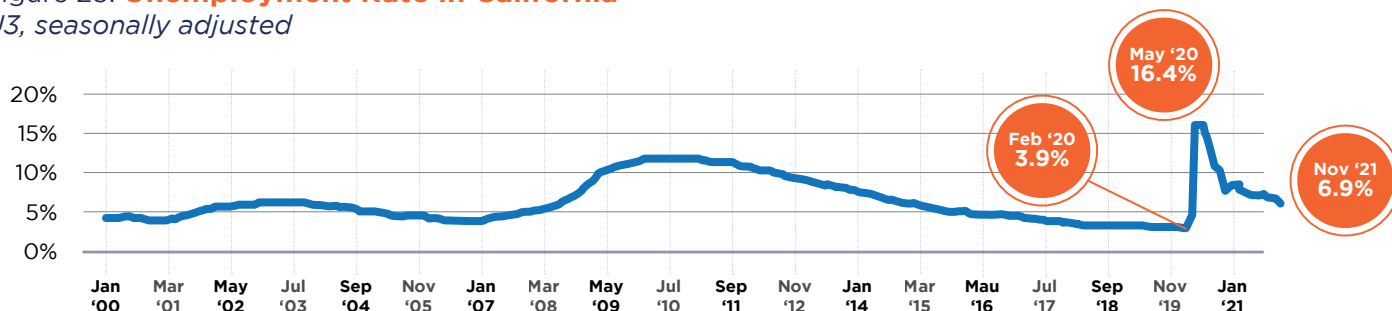
### Unemployment

**2021 was characterized by a continued fall in the state's unemployment rate and by a steep decline in initial unemployment claims.**

Unemployment insurance (UI) claims filing data is a useful supplement to traditional labor force and industry employment metrics, which are characterized by a significant data lag. Due to the sudden nature of the pandemic's economic impact, both in terms of negative effects and subsequent recovery, UI data provide a potential sneak peak of what the near future will look like in the labor market.

Figure 23: **Unemployment Rate in California**

*U3, seasonally adjusted*



Initial claims are defined as how many new people have filed for unemployment benefits in the previous week. Initial claims do not represent the number of individuals filing unemployment claims (unique claimants). During 2020, the state's unemployment rate rose significantly from around **4 percent** in February to a peak of **16.4 percent** in April and May of 2020, ending the year at **9 percent**. From February to December 2020, over **11.25 million initial UI claims were filed in California**.

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**In 2021, the employment situation significantly improved.** From January to November 2021, around **3.5 million initial UI claims were filed in California**. This number represents around a third of the initial UI claims number from February to December 2020. Furthermore, in 2021, the state's unemployment rate fell steadily from **9 percent** in December 2020 to just under **7 percent** in November 2021.

Figure 24: **Initial Unemployment Claims in California**



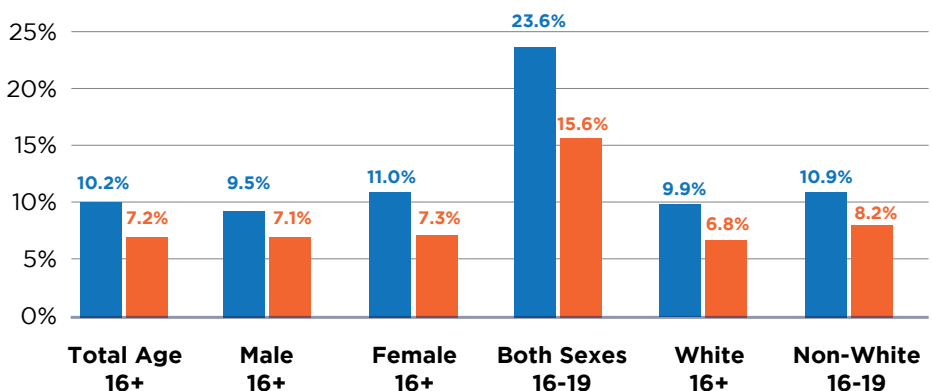
## Employment

**In 2020, California mirrored the national employment experience with service sectors being hardest hit in terms of employment. In general, those hardest hit industries recovered the greatest number of jobs in 2021.**

While 2020 was characterized by job losses in most industries, 2021 was characterized by job gains. Reflecting the national employment experience, the leisure and hospitality industry experienced the greatest job losses between 2019 and 2020. In 2021, leisure and hospitality gained more jobs than any other industry. However, total employment figures still remain below pre-pandemic levels. As recovery continues, the professional and business services industry is expected to add the most jobs out of any in California as it adds back workers lost to the pandemic. Meanwhile, leisure and hospitality, trade, transportation, and utilities, and educational and health services will also add high numbers of jobs. Most industries in the state are projected to expand over the next two years.

Figure 25:  
**Unemployment Rate by Demographic Group, California**

■ Dec-20 ■ Dec-21





# CALIFORNIA

## Housing and Migration

**California faces distinct challenges regarding housing affordability and accessibility that have only been aggravated by the pandemic. During the pandemic, the state has lost population for the first time in over 100 years.**

From 2020 to 2021, the 12-month average median California home listing price increased 11 percent from \$650,748 in 2020 to \$721,996 in 2021. California's median home listing price hit an all-time high of around \$750,000 from March to June 2021 before falling to about \$685,000 in December 2021.<sup>42</sup>

**The golden state's median home listing price was around double the national median home price of approximately \$380,000 for the first half of 2021.<sup>43</sup>** During the second half of 2021, the relative listing price of the median home in California fell to around 80 percent of the national median home price. **The gap in home prices between California and the rest of the United States began widening around 1970 and has continued widening over the past 50 years.**

The steep rise in California's housing prices and rents over the last 50 years is the result of a variety of factors including relatively high and increasing demand for housing, high cost of land and construction in coastal communities, and general resident disapproval of new construction. These increasing costs have led residents to find more affordable inland alternatives, which has served to increase housing prices across the state.<sup>44</sup>

Figure 26:

### Change on Payroll Employment Dec-19 to Dec-21

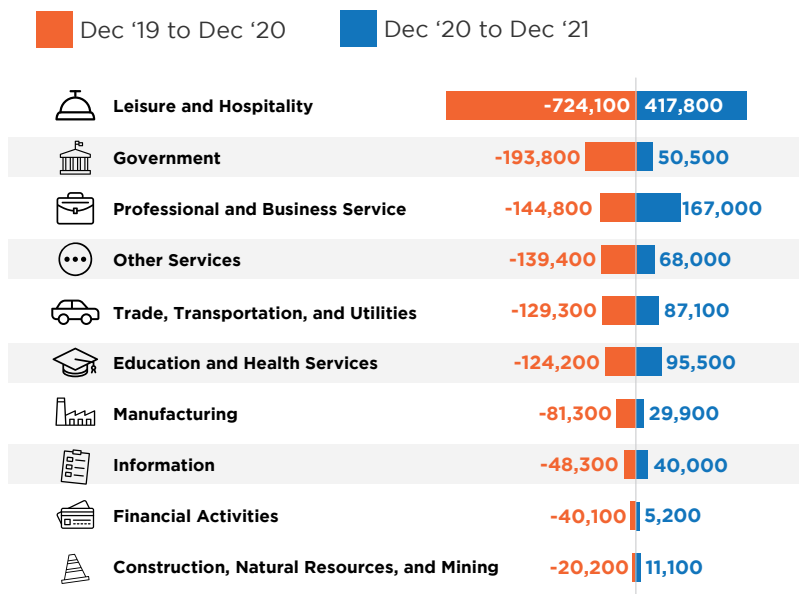
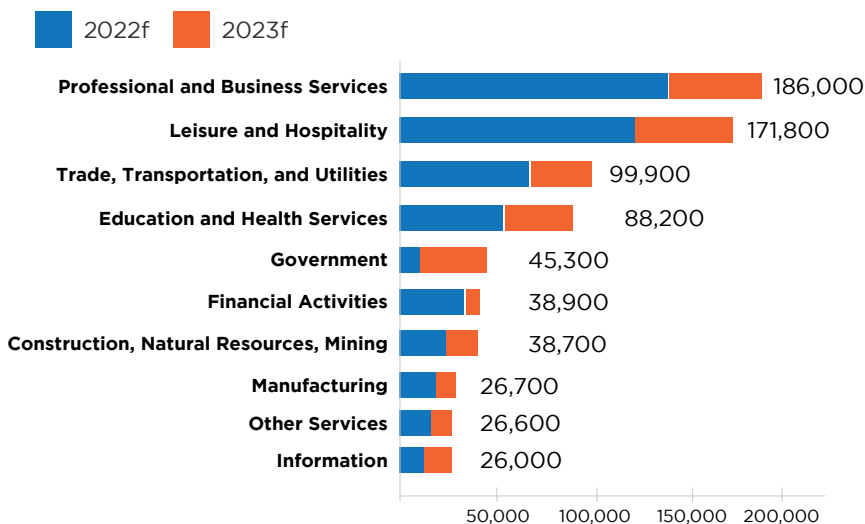


Figure 27: 2022 to 2023 Employment Growth by Industry



<sup>42</sup> Realtor.com, Housing Inventory: Median Listing Price in California [MEDLISPRICA], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/MEDLISPRICA>

<sup>43</sup> FRED, Federal Reserve Bank of St. Louis. Housing Inventory: Median Listing Price in the United States (MEDLISPRIUS), retrieved from <https://fred.stlouisfed.org/series/MEDLISPRIUS>

<sup>44</sup> Taylor, M. (2015). (rep.). California's High Housing Costs: Causes and Consequences.

Legislative Analyst's Office. Retrieved from <https://lao.ca.gov/reports/2015/finance/housing-costs/housing-costs.pdf>

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California ranks 49th in the nation in terms of homeownership rate, only slightly ahead of New York. **Homeownership has been declining steadily in California since its 2006 peak of 60.2 percent.** Housing demand during the pandemic increased all over the country for a variety of reasons including low mortgage interest rates, increases in available cash balances, and remote work effects. In 2020, the most recent year of data, the California homeownership rate rose almost a full percentage point to around **56 percent.**<sup>45</sup>

Housing affordability and availability issues, combined with the negative economic effects of COVID-19, encouraged a record-setting number of California residents to seek alternative, more affordable places to live during the pandemic. This shift in population, due in large part to affordable housing-related issues in California, suggests that **encouraging the construction of housing should remain a state priority.**

Figure 28: **California Homeownership Rates by Year**

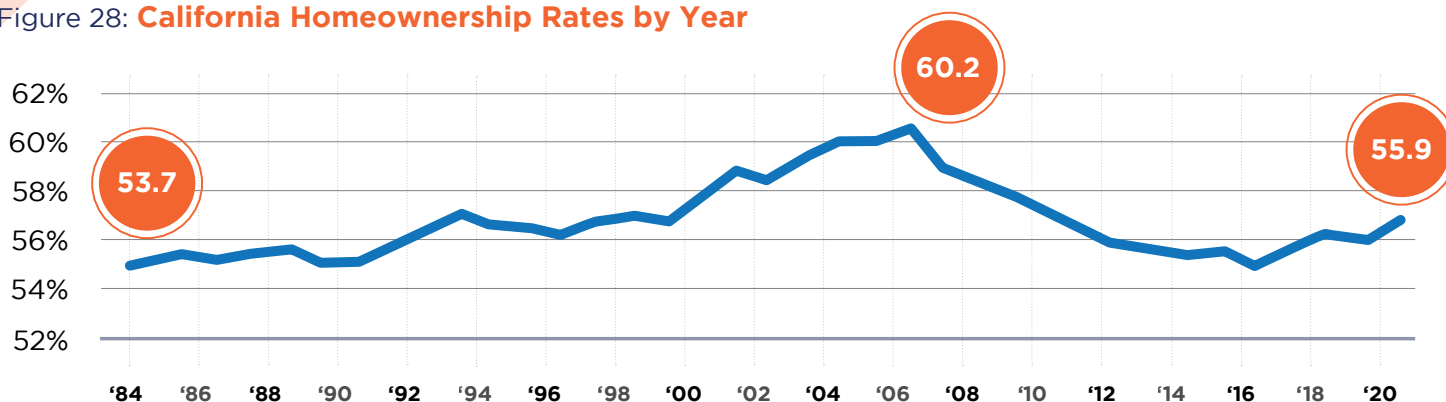
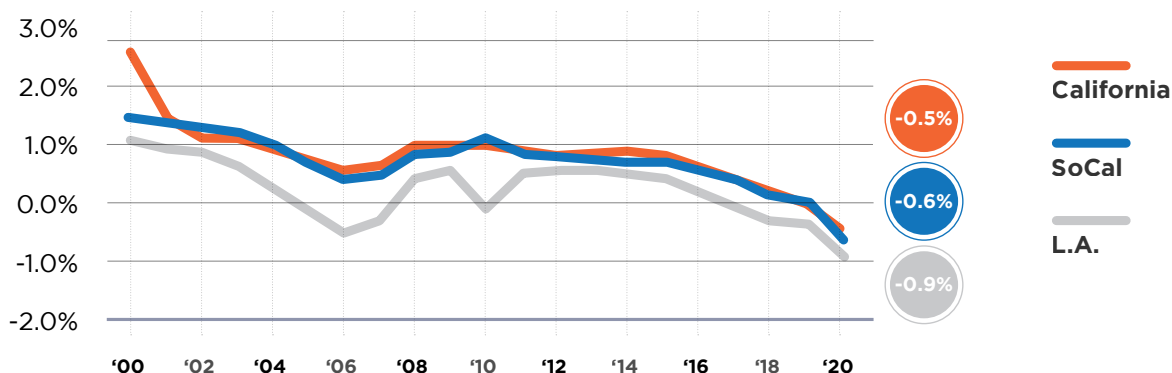


Figure 29: **Year-Over-Year Percent Change in Population**



<sup>45</sup> "Homeownership Rate for California." FRED Economic data. <https://fred.stlouisfed.org/series/CAHOWN>

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Between January 2020 and January 2021, California lost over 182,000 residents to out of state jurisdictions. The California Department of Finance reported that the golden state lost population in 2020 compared to 2019, the first time the population has fallen since records first started being kept in 1900. Causes of the population decline include a decrease in births and immigration, as well as deaths due to COVID-19. The trend continued into 2021 with a population decline of 173,000 between July 2020 and July 2021.<sup>46</sup> **Compared to other California counties, from July 2020 to July 2021, Los Angeles County experienced the greatest fall in overall population, losing 67,521 residents (-0.67%).** Not far behind, the nine-county San Francisco Bay area lost around 64,000 residents (-0.82%) during that period.

**Every county in California has experienced fewer people moving in from out of state since pandemic began.** The California Policy Lab found that the number of people moving to California from other states fell 38 percent since the beginning of the COVID-19 pandemic.<sup>47</sup> The number of Californians leaving to other states rose by around 12 percent which is consistent with pre-pandemic out-migration trends. Combined, these two trends have resulted in a population decline due to **net domestic migration effects (entrances from other states minus exits to other states) that has more than doubled since the pandemic hit.** The majority of these exits are from adults without a bachelor's degree, while the state has been gaining college-educated adults over the past ten years.

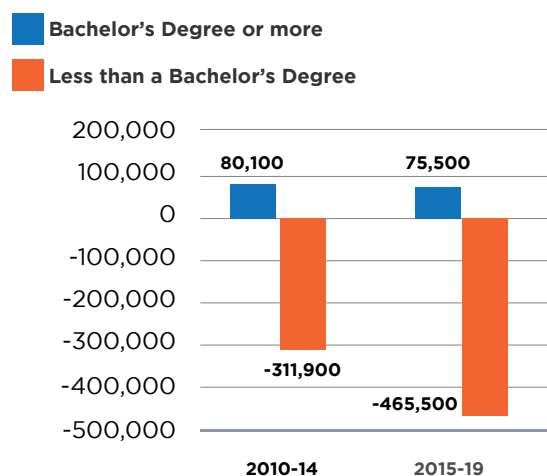
**California exits rose during the pandemic; in 52 out of 58 counties in California, golden state residents who moved during the pandemic were more likely to leave California than they were before the pandemic struck.**

Around 60,000 more California residents left for another state than moved in during the first quarter of 2020. By the third quarter of 2021, that figure had more than doubled, totaling approximately 150,000 net exits. The percentage of movers who left California rose from 16.3 percent in 2016 to 20.3 percent by the end of September 2021.<sup>48</sup>

Figure 30:

## Net Interstate Migration, Age 20-64

Source: Public Policy Institute of California, 2021



<sup>46</sup> Sheeler, A. December 17, 2021. "These 10 California Counties Lost the Most Residents during the COVID-19 Pandemic." The Sacramento Bee. <https://www.sacbee.com/news/politics-government/capitol-alert/article256687647.html>

<sup>47</sup> Coffey, S. December 15, 2021. "New Research Finds Number of People Moving to California from Other US States has Dropped 38 Percent Since the Start of the Pandemic." California Policy Lab. <https://www.capolicylab.org/news/new-research-finds-number-of-people-moving-to-california-from-other-us-states-has-dropped-38-percent-since-the-start-of-the-pandemic/>

<sup>48</sup> Ibid.

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## **People who move into California are different from those who move out of the state.<sup>49</sup>**

According to the Public Policy Institute of California, in general, those who move to California are more likely to be employed, have higher education levels, to earn high wages, and are less likely to be in poverty than people who exit to other states. As a result, **California has been losing relatively low- and middle-income residents to other states while gaining relatively high-income residents from other jurisdictions. However, high-income residents are leaving too:** an analysis of tax returns filed by income category has found an increase in upper-middle income and upper-income residents leaving the state since 2017.<sup>50</sup> In 2020, United Van Lines reported that the two largest income groups moving out of California had earnings of \$100,000 to \$149,000 (24%) and \$150,000 or over (45%).<sup>51</sup>

**California's high cost of living, driven mainly by housing costs, remains an ongoing public policy challenge that reduces opportunities for a significant proportion of the state's residents.** While relatively educated, high-income residents contribute significantly to the state's economy and fiscal health, the current trend highlights the significant economic challenges faced by many low- and middle-income residents.<sup>52</sup>



**A recent survey found that around one-third of golden state residents have given serious thought to leaving California due to housing costs.<sup>53</sup>**

<sup>49</sup> Johnson, H. May 6, 2021. "Who's leaving California-and Who's Moving In?" Public Policy Institute of California. <https://www.ppic.org/blog/whos-leaving-california-and-whos-moving-in/#:~:text=In%20general%2C%20those%20who%20move,than%20those%20who%20move%20away.>

<sup>50</sup> Jackson, K., and Wayne Winegarden. 2021. California Migrating: Documenting the Causes and Consequences of California's Growing Exodus Problem. Pacific Research Institute. [https://www.pacificresearch.org/wp-content/uploads/2021/09/CA-Migration\\_F\\_web.pdf](https://www.pacificresearch.org/wp-content/uploads/2021/09/CA-Migration_F_web.pdf)

<sup>51</sup> Jackson, K., and Wayne Winegarden. 2021. California Migrating: Documenting the Causes and Consequences of California's Growing Exodus Problem. Pacific Research Institute. [https://www.pacificresearch.org/wp-content/uploads/2021/09/CA-Migration\\_F\\_web.pdf](https://www.pacificresearch.org/wp-content/uploads/2021/09/CA-Migration_F_web.pdf)

<sup>52</sup> Johnson, H. May 6, 2021. "Who's leaving California-and Who's Moving In?" Public Policy Institute of California. <https://www.ppic.org/blog/whos-leaving-california-and-whos-moving-in/#:~:text=In%20general%2C%20those%20who%20move,than%20those%20who%20move%20away.>

<sup>53</sup> Baldassare, M, Bonner, D., Lawler, R., and Thomas, D. PPIC Statewide Survey: Californians and Their Government. Public Policy Institute of California. <https://www.ppic.org/publication/ppic-statewide-survey-californians-and-their-government-march-2021/>



# CALIFORNIA

## Looking Forward

The golden state has long faced a number of challenges that have been exacerbated by the pandemic. Ongoing challenges that have been amplified by the pandemic include a declining population, increasing housing costs, and business headquarter exits to other states. The pandemic has served to accelerate trends that may result in significant negative consequences for California. State policymakers will need to take timely and effective steps to address these challenges and reverse existing trends before these issues become prohibitively difficult to fix.

### Housing

**Changes are set to take place in 2022 that are meant to address high housing costs in the state. However, it remains to be seen how effective these policy changes will be.**

Policymakers should continue to address the state's high cost of housing by encouraging an increase in California's housing supply. In September 2021, **Governor Newsom signed Senate Bills 9 and 10, designed to overcome restrictive local zoning ordinances that serve to reduce the supply of housing.**<sup>54</sup>

The first measure authorizes local governments to rezone areas in close proximity to public transit for up to 10 housing units. The second measure requires cities to allow up to four housing units on what was previously designated as single-family lot. A number of cities have been actively fighting the measure and it remains to be seen just how effective it will be in encouraging an increase in the supply of housing.



<sup>54</sup> Thompson, D. "Bringing Home the Bacon Tops New California Laws In 2022." AP News. <https://apnews.com/article/technology-business-health-lifestyle-legislature-c3fae6a642fad54f0eded4c9cce9cc35>

# CALIFORNIA

## Minimum Wage Increases

**In 2022, California will become the first U.S. state to mandate a \$15 minimum wage for businesses with over 25 employees. Minimum wage increases typically have mixed outcomes as employers, employees, and non-working job seekers across the state respond to the increase.**

In addition, businesses with fewer than 25 employees will be required to pay a minimum of \$14 per hour (up from \$13 per hour) in 2022, with this figure rising to \$15 in 2023. The \$15 per hour minimum wage represents a significant 50 percent increase from the \$10 per hour minimum wage that held in 2016.<sup>55</sup>

**A number of cities within the state, particularly in the Los Angeles and San Francisco Bay regions, have already implemented \$15 minimum wage requirements.**

**Increasing the minimum wage will raise the hourly wages paid to employees who currently earn less than the proposed minimum wage and who retain their positions. What happens next is more uncertain** and depends on the behavioral responses of all economic actors in the region — including employers, employees, and non-working job seekers — and how these in turn generate downstream impacts. Downstream impacts can potentially include price increases for the consumer, reduced profits for firms, substituting the lowest-skilled workers with employees that are more productive, job elimination and hours reductions as a cost savings measure, reduced/delayed future employment plans, and may encourage more automation over the long-term. These possible negative effects have the potential to particularly affect parts of the state that have not had the opportunity to adapt more slowly

with a previous \$14 or \$15 minimum wage in place. Additionally, **parts of the state with higher concentrations of low-skilled employees will likely experience the more pronounced effects.**

The minimum wage increase has the potential to negatively affect employment recovery in industries that have been relatively hard-hit during the pandemic. The Site Selection Group, which connects businesses to optimal business locations, estimated that **the combined California minimum wage increases will potentially cause over 500,000 workers “employed in manufacturing plants, distribution centers, and call centers” to lose their jobs.**<sup>56</sup> Other research has found that across the 21 states and Washington D.C. that increased their minimum wages in 2019, 64 percent of restaurants reduced employee hours and 43 percent eliminated jobs.<sup>57</sup>

<sup>55</sup> Turman, L.J.M., and Eric M. Walder. April 5, 2016. “California Governor Signs into Law New Bill Raising Minimum Wage to \$15 per Hour.” Employment Law Watch, Reed Smith. <https://www.employmentlawwatch.com/2016/04/articles/employment-us/california-governor-signs-into-law-new-bill-raising-minimum-wage-to-15-per-hour/>

<sup>56</sup> White, K. May 24, 2016. “Over Half a Million Manufacturing, Distribution and Call Center Jobs are at Risk Due to California’s Minimum Wage Increase,” Site Selection Group Blog. <https://info.siteselectiongroup.com/blog/manufacturing-distribution-call-center-jobs-at-risk-due-to-californias-minimum-wage-increase>

<sup>57</sup> Shenker, N. 2020. “How Restaurants are Dealing with Minimum Wage Increases,” On the Line. <https://pos.toasttab.com/blog/on-the-line/how-restaurants-deal-with-minimum-wage-increases>

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**Reductions in employment resulting from the increase in the minimum wage may take months to materialize as employers substitute labor-saving equipment and make other adjustments in response to the increased minimum wage.** In this way, the increase in the minimum wage may result in reduced opportunities for a portion of low-skilled workforce and may further increase the out-migration of lower-income workers to other states. California's high cost of living, combined with the increase in the state's minimum wage may serve to further increase the outflow of population from the state.

**Small businesses and businesses that are just staying afloat are more likely to experience latent negative effects of the minimum wage increase.** The increase has the potential to significantly increase business labor costs in some operations and can determine whether these businesses fail or relocate to other jurisdictions. In response to minimum wage hikes, some businesses will react by eliminating jobs, reducing worker hours, replacing employees with labor-saving technology, or leaving the state altogether. Small businesses will be particularly burdened by the added costs resulting from the minimum wage. As an essential part of the economy and an integral piece of the recovery, anything that negatively impacts small businesses has the potential to affect the trajectory of California's economic recovery from the pandemic.

## Business Exits

**The Golden State has been plagued by a significant number of business exits for over a decade. The pandemic has served to accelerate the number of business headquarters leaving California for other states.**

Business exits have plagued California for well over a decade and evidence shows that this negative trend has only accelerated since the pandemic struck. An August 2020 CNBC report found that between 2008 and 2019 around 18,000 businesses have left California for other states.<sup>58</sup> One reason for the recent bump in business exits is that some relocation plans were on hold during the worst of the COVID-19 pandemic in order to avoid flying and hotel stays, having to meet virtually for important discussions with economic development officials and commercial realtors, and increasing anxiety among employees who would need to move during the pandemic. In addition, business slowdowns resulting from the pandemic-induced downturn provided a necessary pause to undertake business relocations.

## Headquarters Moved Recently from California

- Hewlett Packard
- Oracle
- Palantir Technologies
- Tesla
- SpaceX
- AECOM
- Jacobs Engineering Group
- CBRE Group
- Toyota Motor Corp.
- Occidental Petroleum Corp.

<sup>58</sup> Shenker, N. 2020. "How Restaurants are Dealing with Minimum Wage Increases," On the Line. <https://pos.toasttab.com/blog/on-the-line/how-restaurants-deal-with-minimum-wage-increases>

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Business headquarters have left the state at a record pace during the pandemic. Some notable businesses that left the state in 2020 include Hewlett Packard, Oracle, and Palantir Technologies.<sup>59</sup> **More business headquarter relocations took place in the first half of 2021 (from January to June) than in all of 2018 or 2020, and only four fewer took place during that period than in all of 2019.**<sup>60</sup> In addition, the monthly average number of relocations in 2021 increased significantly from an average of 4.8 in 2018 and 6.5 in 2019 to an average of 12.3 per month in the first half of 2021.<sup>61</sup> In 2021, Tesla, the sixth largest company in the world by market capitalization, officially moved its headquarters from California to Texas. Losing successful businesses serves to change California's business landscape. This accelerated rate of business headquarter relocations to other states is altering the state's economy and represents a loss of relatively high-paying jobs and state and local tax revenues. In addition, **business departures exert a negative effect on former suppliers to those businesses, who may experience output, revenue, and job losses, and may be encouraged to leave the state as well.**

A recent survey of 200 business executives in R&D, IT, manufacturing, clean tech, and energy industries asked about factors that were considered regarding decisions about locating in California.<sup>62</sup> The **surveyed business executives cited high cost of housing and real estate and the high cost of doing business as primary reasons for not locating, not expanding, or for leaving California.**

**Approximately 88 percent of the surveyed executives cited the state's high cost of housing and real estate as principal barriers.**

Executives explained that unaffordable housing would make it particularly difficult to get employees to move to California. Around **71 percent** of surveyed executives cited regulations and labor laws as factors negatively influencing their California location decisions. Furthermore, executives mentioned California's transportation infrastructure as a negative influence on location decisions.

In addition to complete business exits and headquarter relocations, large businesses in California have been relocating jobs to other states. For example, in July 2021, the Walt Disney Company announced that it will be **relocating 2,000 jobs** (not its headquarters) in 2022 from the Los Angeles area to Orlando, Florida.<sup>63</sup>

<sup>59</sup> Schoolov, K. January 23, 2021. "Why Some Tech Companies and Billionaires are Leaving California." CNBC. <https://www.cnbc.com/2021/01/23/why-companies-are-fleeing-california.html>

<sup>60</sup> Bursztynsky, J. December 22, 2020. "Oracle is moving its headquarters from Silicon Valley to Austin, Texas." CNBC. <https://www.cnbc.com/2020/12/11/oracle-is-moving-its-headquarters-from-silicon-valley-to-austin-texas.html>

<sup>61</sup> Vranich, J., & Ohanian, L. E. (2021). "Why Company Headquarters Are Leaving California in Unprecedented Numbers." Hoover Institution. <https://www.hoover.org/sites/default/files/research/docs/21117-ohanian-vranich.pdf>

<sup>62</sup> Pacific Research Institute. 2018. Pacific Research Institute Survey Why California's Most Coveted Industries Aren't Coming to the Golden State. [https://www.pacificresearch.org/wp-content/uploads/2018/02/SurveyDoc\\_F\\_NewWebLow.pdf](https://www.pacificresearch.org/wp-content/uploads/2018/02/SurveyDoc_F_NewWebLow.pdf)

<sup>63</sup> Witthaus, J. and Richard Bilbao. "Breaking: Disney Confirms Plans to Build Campus In Lake Nona And Relocate 2,000 Jobs Here." Orlando Business Journal. July 15, 2021. <https://labusinessjournal.com/news/2021/jul/15/disney-moving-2000-jobs-florida/>



# CALIFORNIA

## The 2022-2023 California Blueprint <sup>64, 65</sup>

The California Blueprint was designed to address many of the golden state's biggest challenges and to encourage strong economic growth. The California Blueprint plans to spend billions addressing the COVID-19 pandemic, the climate crisis, economic inequality, homelessness, and crime.

California state revenues are currently at an all-time high due in large part to significant growth in tax receipts during the pandemic. **On January 10, 2022, California Governor Gavin Newsom unveiled his administration's 2022-2023 budget proposal**, the California Blueprint, that would take advantage of the state's favorable fiscal position in order to cut taxes while also investing in five key areas: COVID-19 pandemic, the climate crisis, economic inequality, homelessness, and crime.

The Blueprint's biggest proposed tax cut targets businesses. At the beginning of the pandemic, **California temporarily raised taxes on businesses to help offset a projected fiscal deficit**. However, California posted record surpluses during the pandemic. Although the temporary tax increase was scheduled to end at the end of 2022, Newsom is proposing to end it early.

Californian drivers are at present paying the highest gas prices in the country, with the state gasoline tax currently over 50 cents per gallon. **The gasoline tax is scheduled to increase on July 1st**; however, Governor Newsom is proposing to postpone the tax increase. While postponing the gasoline tax increase will reduce the revenue raised by the tax by about \$523 million, which would largely be spent on transportation infrastructure such as roads and bridges, Newsom believes that California can replace the loss with the current revenue surplus.



<sup>64</sup> Beam, A. January 10, 2022. "California Governor Proposes Tax Cuts, Expanded Health Care." AP News. <https://apnews.com/article/coronavirus-pandemic-health-business-gavin-newsom-personal-taxes-dc3aec1f0a693e508c2c0864d722af7>

<sup>65</sup> Office of Governor Gavin Newsom. January 10, 2022. "Governor Newsom Releases California Blueprint to Take on the State's Greatest Existential Threats and Build on Historic Progress." <https://www.gov.ca.gov/2022/01/10/governor-newsom-releases-california-blueprint-to-take-on-the-states-greatest-existential-threats-and-build-on-historic-progress/>

# CALIFORNIA

**The California Blueprint plans to spend billions addressing the COVID-19 pandemic, the climate crisis, economic inequality, homelessness, and crime.** In order to address these key areas of focus, the California Blueprint proposes to:

- Allocate \$2.7 billion for COVID-19 vaccinations and boosters, testing, and to increase the number of medical personnel in order to effectively address potential future COVID-19 surges.
- Address the state's wildfire challenge. The Blueprint proposes to spend \$648 million to support firefighters, purchase helicopters, and purchase dozers. Furthermore, \$1.2 billion will be allocated towards forest management and other practices to help prevent wildfires and save property and lives.
- Allocate \$2 billion to provide mental health housing and services and to clear homeless encampments.
- Encourage the building of more housing in California by planning to allocate \$2 billion in new grants and tax credits towards new housing construction.
- Support small businesses in the state by cutting red tape, waiving fees, and providing grants and tax breaks to small businesses that have been negatively impacted by the pandemic.

**While only proposed for the 2022-2023 fiscal year, Governor Newsom's California Blueprint represents an important step towards addressing many of the state's most significant and enduring challenges.**



# LOS ANGELES COUNTY

**While the immediate effect of the pandemic on employment in Los Angeles County was swift and severe, recovery across many industries has also been taking place at a particularly high rate. The future path of the County's economic recovery will continue to be closely linked to the COVID-19 pandemic.**

At the beginning of 2020, Los Angeles County was experiencing a long and unprecedented period of economic strength. However, by the end of the first quarter of 2021, the COVID-19 pandemic struck, temporarily halting economic growth and stability in the region.

Figure 31: **Los Angeles Headline Statistics and Forecast**

	2017	2018	2019	2020	2021f	2022f	2023f
<b>Real GDP Growth</b>	3.5%	2.9%	3.3%	-6.3%	6.8%	4.6%	2.6%
<b>Real Personal Income Growth</b>	1.2%	1.4%	3.1%	6.2%	1.3%	-2.1%	2.6%
<b>Total Employment Growth</b>	1.6%	1.5%	0.8%	-11.8%	7.0%	3.0%	1.3%
<b>Unemployment Rate</b>	4.8%	4.7%	4.6%	12.8%	9.6%	6.4%	5.1%

Los Angeles County's "Safer at Home" order, issued on March 19, 2020, mandated closures and restrictions that significantly affected a number of businesses. Bars, fitness centers, schools, and entertainment venues were forced to close. In-person dining at restaurants was prohibited with restaurants being limited to take-out and delivery services. Restrictions were relaxed towards the end of May 2020 but were reinstated in July and November which impacted the path of economic recovery, particularly for businesses directly affected by reinstated restrictions.

The structure of the Los Angeles County economy is characterized by a relatively high prevalence of the types of industries (and their accompanying workforce) that were most hard-hit by the pandemic. These industries require a high degree on in-person interaction, and include sectors focused on entertainment, particularly the film and television industry, and the types of businesses that cater to tourists such as restaurants and hotels. As a result, Los Angeles County was particularly hard-hit compared to California or the nation as a whole.



# LOS ANGELES COUNTY

**While the immediate effect of the pandemic on employment in Los Angeles County was swift and severe, recovery has also been taking place at a particularly high rate.**

Although jobs recovered at a slower rate in the county compared to California and the U.S. during 2020 and the first half of 2021, during the second half of 2021 Los Angeles County has been adding jobs back at a faster rate than the state or the nation. Nevertheless, **Los Angeles County's economy has yet to fully recover from the pandemic-induced downturn.** Furthermore, economic recovery has been uneven, with some industries experiencing stronger recovery than others.

Los Angeles County's economic recovery in the years to come will depend on a variety of factors including the future trajectory of the COVID-19 pandemic. Important industries in Los Angeles County provide services that require high degrees of in-person interaction. As a result, the economic performance of many of these industries will be inextricably linked with the state of the pandemic.

## Major Economic Indicators

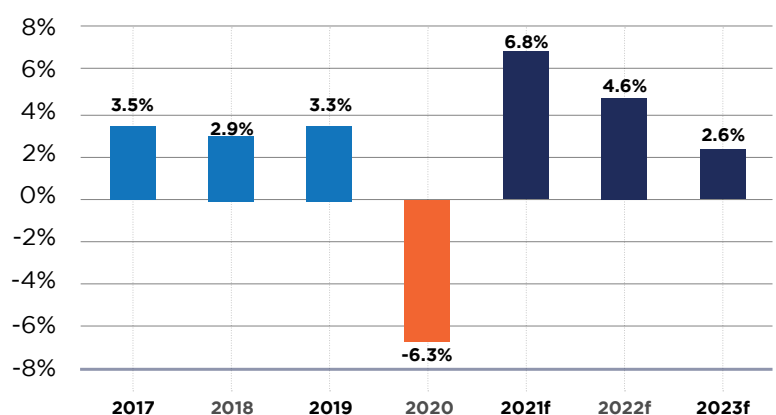
### Real Gross County Product

**The Los Angeles County economy experienced a strong recovery in 2021 which offset losses from the previous year with further growth expected in the future.**

Gross county product is expected to grow by 6.8 percent in 2021 and is projected to grow by another 4.6 percent in 2022.

Although growth is expected to slow over the next two years after the major rebound of 2021, there are positive signs that the county economy is getting back on track after the losses in 2020 (Figure 32).

Figure 32: **Los Angeles County Real Growth GCP**





# LOS ANGELES COUNTY

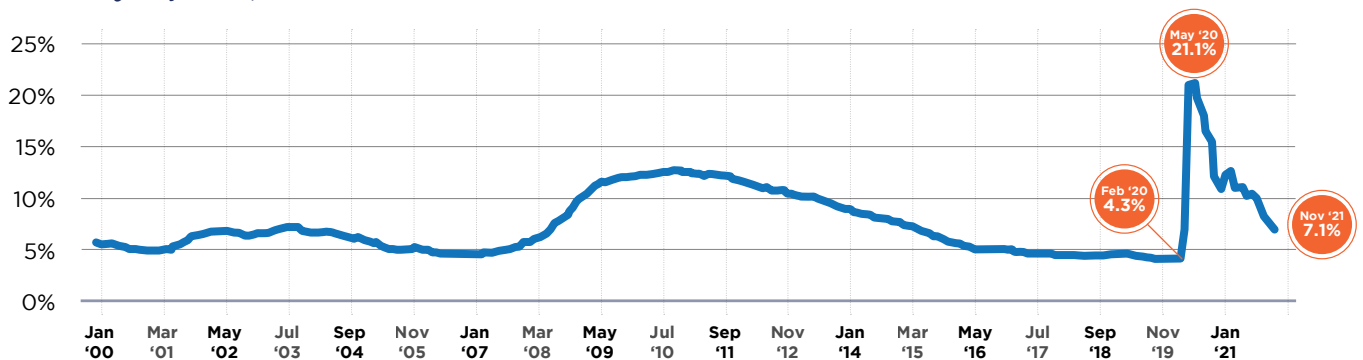
## Unemployment

**During 2021, the unemployment rate in Los Angeles County continued to fall.**

The negative employment effects of the COVID-19 pandemic were most severe in March and April 2020; approximately 716,100 nonfarm jobs were lost within those two months. By May 2020, **Los Angeles County's seasonally adjusted unemployment rate had climbed sharply from 4.3 percent in February to 21.1 percent.** By December 2020, the unemployment rate in Los Angeles County had fallen back down to 12.3 percent.

In 2021, the unemployment rate in Los Angeles County continued to fall. February's unemployment rate declined almost two percentage points, reflecting the loosening of restrictions when the Regional Stay at Home Order was rescinded statewide on January 25. **The unemployment rate in August was below 10 percent for the first time since the pandemic struck.** By November, the unemployment rate had fallen to around 7 percent.

Figure 33: **Unemployment Rate in L.A. County**  
(U3, Seasonally adjusted)



## Employment

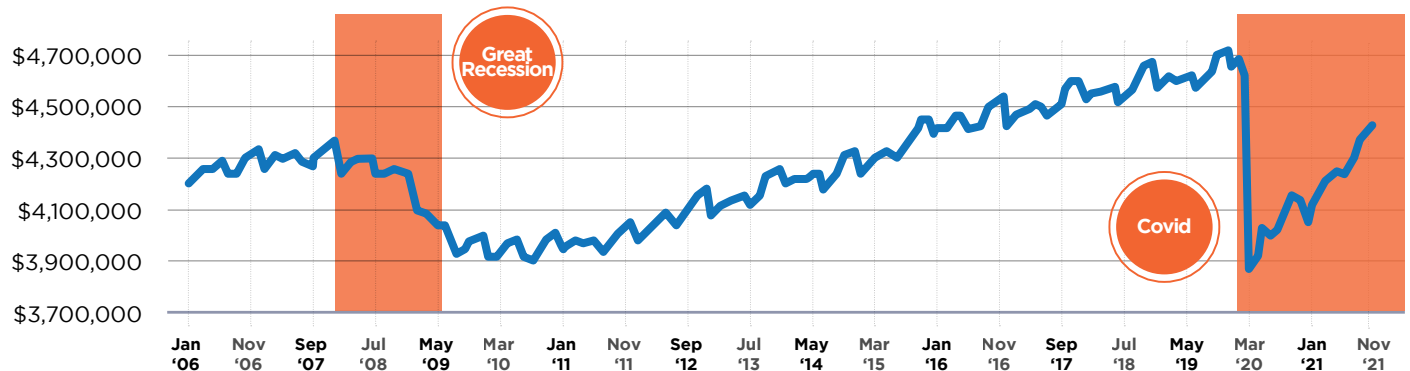
**While employment in L.A. County has recovered significantly across all industries since 2020 employment lows, total employment in L.A. County is still below January 2020 levels.**

All major industry sectors in Los Angeles County experienced a decline in employment as a result of the pandemic in 2020. The leisure and hospitality sector and trade, transportation, and utilities sector (which includes retail trade) experienced the most significant negative employment shocks in terms of total job losses. The leisure and hospitality

industry, whose components include arts, entertainment, and recreation as well as accommodation and food services, was extremely hard hit as tourism all but disappeared during the depths of the pandemic and most offered services could not be provided remotely.

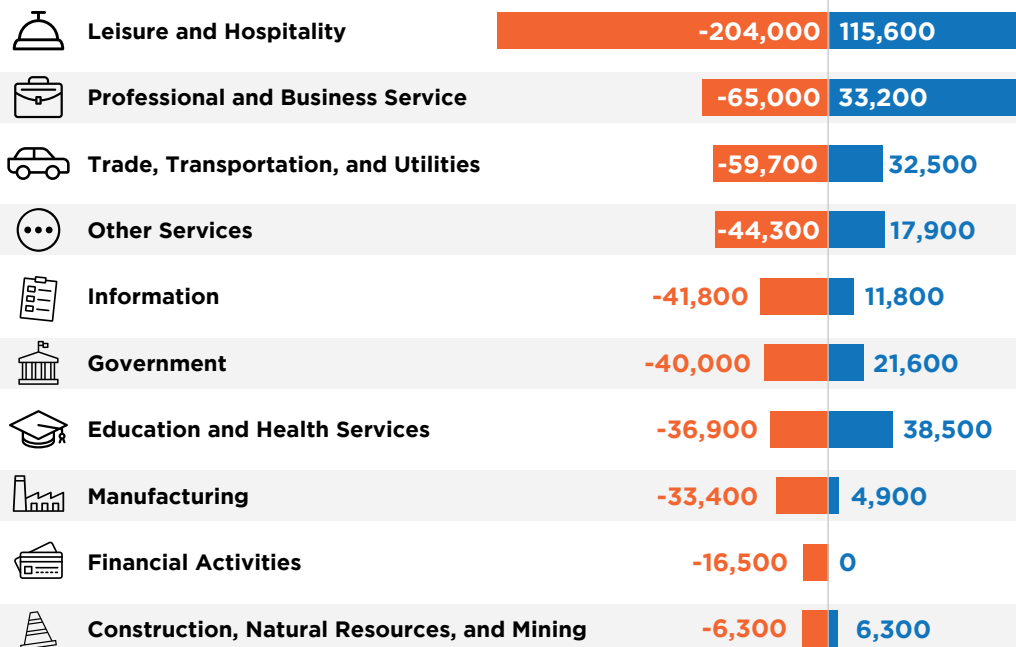
# LOS ANGELES COUNTY

Figure 34: **L.A. County Total Wage and Salary Employment**



**Compared to the Great Recession, the immediate effect of the pandemic on employment was swifter and more significant.** However, the rate of employment recovery has so far been more rapid than during the Great Recession. Throughout the pandemic, Los Angeles County experienced the greatest job loss associated with the measures taken to mitigate the spread of the virus that took place between March and April, when **more than 772,000 jobs fell off county nonfarm payrolls.** Since then, Los Angeles County has added around **67.5 percent of those jobs back.**

Figure 35: **Change in Payroll Employment, Dec-19 to Dec-21**



# LOS ANGELES COUNTY

**The decline and recovery of jobs from the pandemic-induced recession has been highly influenced by factors such as which types of businesses can effectively operate remotely during extended economic shutdowns and with COVID-19 precautions in place.**

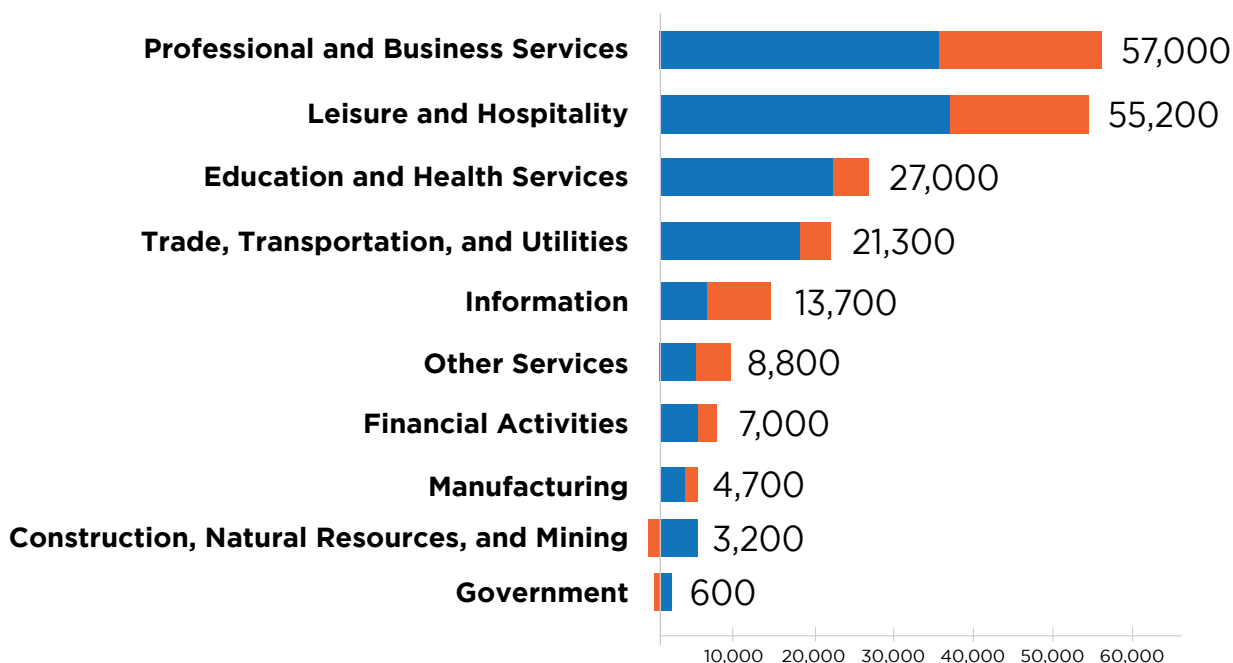
While the hardest hit industries are trending upwards, many still have quite a way to go before they reach pre-pandemic employment levels. **While the Los Angeles region continues to recover from the pandemic-induced downturn, industries that were hardest-hit by the pandemic are still trailing behind in the recovery process.** These lagging industries include leisure and hospitality, information (which includes the motion picture and sound recording industry), and other services (which includes personal care services such as hair and nail salons).

Overall, employment in L.A. County was significantly up across most industries in 2021 compared to the depths of the pandemic in 2020. The hardest-hit industries added the highest number of jobs with leisure and hospitality adding back the most. Though Los Angeles County has been adding jobs back to payrolls on a monthly basis, employment in L.A. County is still significantly below January 2020 levels.

Over the next two years, professional and business services, leisure and hospitality, and education and health services are expected to add the most payroll jobs.

Figure 36: **2022 to 2023 Employment Growth by Industry**

2022f 2023f



# LOS ANGELES COUNTY

## Looking Forward

Los Angeles County is quickly recovering from the negative economic and social effects of the COVID-19 pandemic. The pandemic-induced job losses, business failures, industry shifts, and overall social and economic changes, will have ramifications that will extend beyond the end of the pandemic.

In addition to the economy-wide transformative shifts discussed earlier in the report, a number of developments specific to Los Angeles County were identified.

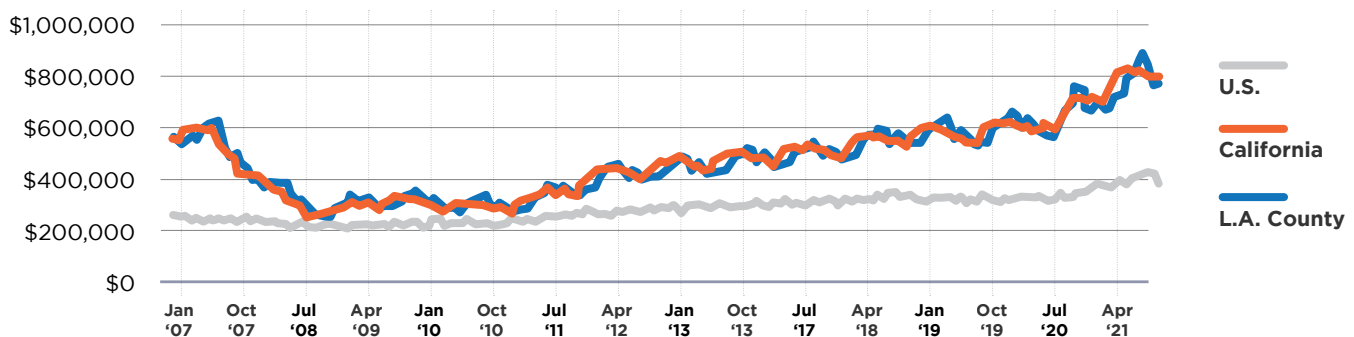
### Housing

**Housing in the Los Angeles region has significantly increased in value throughout the pandemic and closed 2021 2.5 times higher than the value of the typical home in the United States. While the increase in Los Angeles home values is expected to slow in the coming years, high housing costs will continue to remain an important characteristic of the region.**

The change in consumer housing demand during the pandemic, against a backdrop of extraordinarily low inventories in the Los Angeles region, has led to a significant increase in home values, with the median seasonally adjusted typical home value (which includes single family, condominium, and cooperative home types) in the county topping \$800,000 for the first time in September 2021.<sup>66</sup> From October 2020 to November 2021, Los Angeles County home values increased by over 17 percent. Home values in Los Angeles County closed 2021 at around 2.5 times higher than the value of the typical home in the United States.



Figure 37: **Median Home Value**



<sup>66</sup> Zillow. Los Angeles County Home Values. <https://www.zillow.com/ca-91841/home-values/>



# LOS ANGELES COUNTY

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Housing demand during the pandemic increased for a variety of reasons including increased cash balances for down payments, low mortgage interest rates, and remote work effects. That being said, **this increase in home values is the product of a long-term trend as well and, although home value increases are expected to slow in the near future,** we expect the trend to continue unless there is a substantial housing supply increase or an economic shock that serves to significantly decrease demand for homes.

Adding to the issue is the degree of rent burden that residents of the county face. As seen in the previous report, **about 51 percent of renter households in California were rent burdened** — spending more than a third of their income on housing — in 2019. About a quarter of households were extremely rent burdened.

Incentivizing the building of new and affordable housing should always be on the state and county's radar of pertinent economic legislation.



# LOS ANGELES COUNTY

## Potential Upcoming Labor Issues

**Across all negotiations for new labor agreements, resolving any potential disputes quickly and effectively will be key to keeping these industries and the larger economy on the path to full recovery.**

Several potential labor issues in 2022 have the potential to interrupt economic recovery in the Los Angeles region, here are a few key ones.

## Global Trade: ILWU Labor Negotiations

The year 2021 was characterized by significant backups at Los Angeles County's ports of Long Beach and Los Angeles (collectively known as the San Pedro Bay Ports), as people shifted their spending away from services and started buying more goods. Backups at the ports related to unprecedented numbers of ship arrivals exacerbated pandemic-related global supply chain issues. This year, if an agreement is failed to be reached during upcoming labor negotiations, potential work stoppages may lead to additional backups and supply chain issues.

The International Longshore and Warehouse Union (ILWU) will be seeking a new collective bargaining agreement with the Pacific Maritime Association (PMA), who represents ports and terminal operators on the West Coast. The current contract is set to expire at the end of June 2022. Key themes in the upcoming discussions are expected to include wages and benefits, automation and other technological advancements, and conditions at the ports. If an agreement cannot be reached, and workforce stoppages and service disruptions cannot be avoided, it will have negative implications for the supply chain and goods movement industries. Moreover, further diversion of the discretionary import segment to other ports on the East coast and Gulf coasts, and to British Columbia may take place, negatively affecting the local economy. A quick resolution to any potential labor disruption in 2022 will play a key role in the performance of the trade and logistics industry and the regional economy.



# LOS ANGELES COUNTY

## Film & Television Production: Labor Negotiations

Fast acting agreements made with guilds and unions helped Los Angeles' iconic film and television industry rebound in 2021. COVID-19 protocols were outlined and agreed upon early, in the latter half of 2020, allowing workers in the industry to safely return to filming locations throughout 2021. Companies and unions together agreed to allow employers to mandate vaccinations as a condition of employment. A number of potential strikes were avoided, including the agreement between the International Alliance of Theatrical Film and Theater Trade Unions (IATSE), representing workers involved in streaming productions for companies such as Netflix, Disney+, and Apple TV, and the Alliance of Motion Picture & Television Producers (AMPTP). IATSE is the union that represents below the line workers in the film and television production industry, many of whom are middle-skilled, such as camera operators, makeup artists, prop makers, set dressers, lighting technicians, editors, script coordinators, hairstylists, cinematographers, and writers' assistants. It should, however, be noted that the new three-year agreement, which successfully avoided a production shutdown in October of last year, was made within mere hours before a strike deadline.

## Teamsters Local 399

Other labor unions involved in negotiations this year include: the Teamsters Local 399 and the Basic Crafts unions<sup>67</sup> negotiating their "Black Book" agreement with AMPTP, covering below the line workers such as animal trainers and handlers, wranglers, drivers, dispatchers, mechanics, and auto-service workers, into early January. The Location Managers Agreement and its Casting Directors Agreement also will be negotiated this year in separate talk with AMPTP.<sup>68</sup>



<sup>67</sup> Basic Crafts unions include IBEW Local 40, Studio Utility Employees Local 724, Studio Plumbers Local 78 and Studio Plasterers Local 755

<sup>68</sup> Carter, James. January 10, 2022. Editorials 24. Hollywood's Teamsters Local 399 & Basic Crafts Set Date to Resume Contract Talks. <https://editorials24.com/2022/01/hollywoods-teamsters-local-399-basic-crafts-set-date-to-resume-contract-talks-editorials24/#::-text=Jan%2010%2C%202022%20Negotiations%20for%20a%20new%20film, later%20to%20take%20a%20break%20for%20the%20holidays>



# LOS ANGELES COUNTY

## SAG-AFTRA and Netflix

Labor negotiations in 2022 also have the potential to affect the ongoing recovery taking place in the region's all-important film and television industry. In July of 2019, SAG-AFTRA signed a bilateral agreement with Netflix, its first direct agreement with a global streaming service, which is set to expire on June 30, 2022. According to SAG-AFTRA, the original agreement included: "gains in theatrical residuals, greater rights for members in the areas of options and exclusivity, improved overtime rules for stunt performers, and specific protections for members regarding harassment and auditions."<sup>69</sup> Looking ahead, we expect the recent increase in concern with worker quality of life and safety to enter into the negotiation.

## Other upcoming negotiations

The Animation Guild (TAG) was not a part of the IATSE agreement with the AMPTP; their negotiations were postponed until early 2022. The negotiation is expected to include measures for pay parity with the writers of other, higher paid mediums like live action productions. Additionally, the SAG-AFTRA and Joint Policy Committee (JPC) Commercials Contract is set to expire on March 31, 2022.

Film and television labor's current more aggressive stance is largely the result of a recent increase in concern with worker quality of life and safety, partially induced by the COVID-19 pandemic. Following the Rust shooting tragedy, issues of physical and mental safety on the job have become important topics that will likely need to be addressed by the industry in the near future.<sup>70</sup>

Looking beyond 2022, several labor agreements with the Alliance of Motion Picture and Television Producers (AMPTP) are set to expire in 2023, including agreements with SAG-AFTRA and Writers Guild West.



<sup>69</sup> SAG-AFTRA. July 19, 2020. SAG-AFTRA and Netflix Announce Historic Contract. <https://www.sagaftra.org/2019-netflix-agreement>

<sup>70</sup> Baum, G. and Katie Kilkenny. December 17, 2021. "Inside the Hollywood Labor Rebellion: 'We Have Awoken a Sleeping Giant.'" The Hollywood Reporter.



# LOS ANGELES COUNTY

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## **Petroleum Refineries: USW Labor Negotiations**

Talks for a new contract between the United Steelworkers union and oil refiners and chemical makers (represented by Marathon Petroleum Corp), began in mid-January to negotiate a new contract that is expected to impact about 30,000 workers across the U.S. The current existing three-year contract expired February 1, 2022. At the time of this writing, it is unknown whether a proposal submitted to USW for a no-strike period of up to 120 days after the contract expiration will be accepted.

Los Angeles County is home to several of the large refineries that may be impacted if negotiations do not go smoothly. Due to the high gasoline standards in our state, California refineries typically operate at or near maximum capacity in order to meet statewide demand. When refineries in the state experience unplanned outages, the price of gas jumps in response to the reduced supply and gasoline imports increase. Production issues also directly translate into price increases due to the high in-state demand for refined products and the lack of interstate pipelines into California.

## **The Digital Divide**

**The COVID-19 pandemic laid bare how differences in access to internet, affordability of internet, device ownership, and digital literacy, a group of concepts known as the digital divide, put up barriers to schooling, working from home, attending telehealth appointments, and many other facets of life.**

In Los Angeles County, the digital divide disproportionately impacts residents in the historical underserved neighborhoods of South and East LA, where there are fewer internet service providers, lower adoption rates, and less fiber infrastructure.<sup>71</sup> Across California, the demographic groups that have been affected are low-income households, Latino households, and those with a disability.<sup>72</sup>

In response to the digital divide, the county has funded forward-looking projects to pioneer solutions and gather community input. The county has explored building a community wireless network, which would place antennae on county real estate assets and provide wireless internet to directly homes.<sup>73</sup> Additionally, it funded the Supervisorial District 2 Digital Equity Demonstration Project, administered by LAEDC, which explored Willowbrook and Lynwood residents' experiences with the digital divide. Along with its partner UNITE-LA, LAEDC co-convenes Los Angeles County's Regional Broadband Consortium (RBC) as designated by the California Public Utilities Commission (CPUC). This RBC is known as the LA Digital Equity Action League (LA DEAL). In that capacity, LAEDC strives to promote digital equity and advance localized solutions to the multifaceted challenges presented by the digital divide.

<sup>71</sup> Galperin, H., Le, T. V., & Wyatt, K. (2021). Who gets access to fast broadband? Evidence from Los Angeles County. Government Information Quarterly, 101594. <https://doi.org/10.1016/j.giq.2021.101594>

<sup>72</sup> Galperin, H. (2021, March). Statewide Survey on Broadband Adoption 2021. California Emerging Technology Fund (CETF) and USC Annenberg School for Communication and Journalism. [https://www.cetfund.org/wp-content/uploads/2021/03/Annual\\_Survey\\_2021\\_CETF\\_USC\\_Final\\_Summary\\_Report\\_CETF\\_A.pdf](https://www.cetfund.org/wp-content/uploads/2021/03/Annual_Survey_2021_CETF_USC_Final_Summary_Report_CETF_A.pdf)

<sup>73</sup> Broadband Equity Partnership, HR&A Advisors, Incorporated, & CTC Technology and Energy. (2021, September Internal Services Department, County of Los Angeles. <http://file.lacounty.gov/SDSInter/bos/bc/1113566UtilizingExistingInfrastructureandResourcestoAccelerateDigitalEquity9-30-21.pdf>

# LOS ANGELES COUNTY

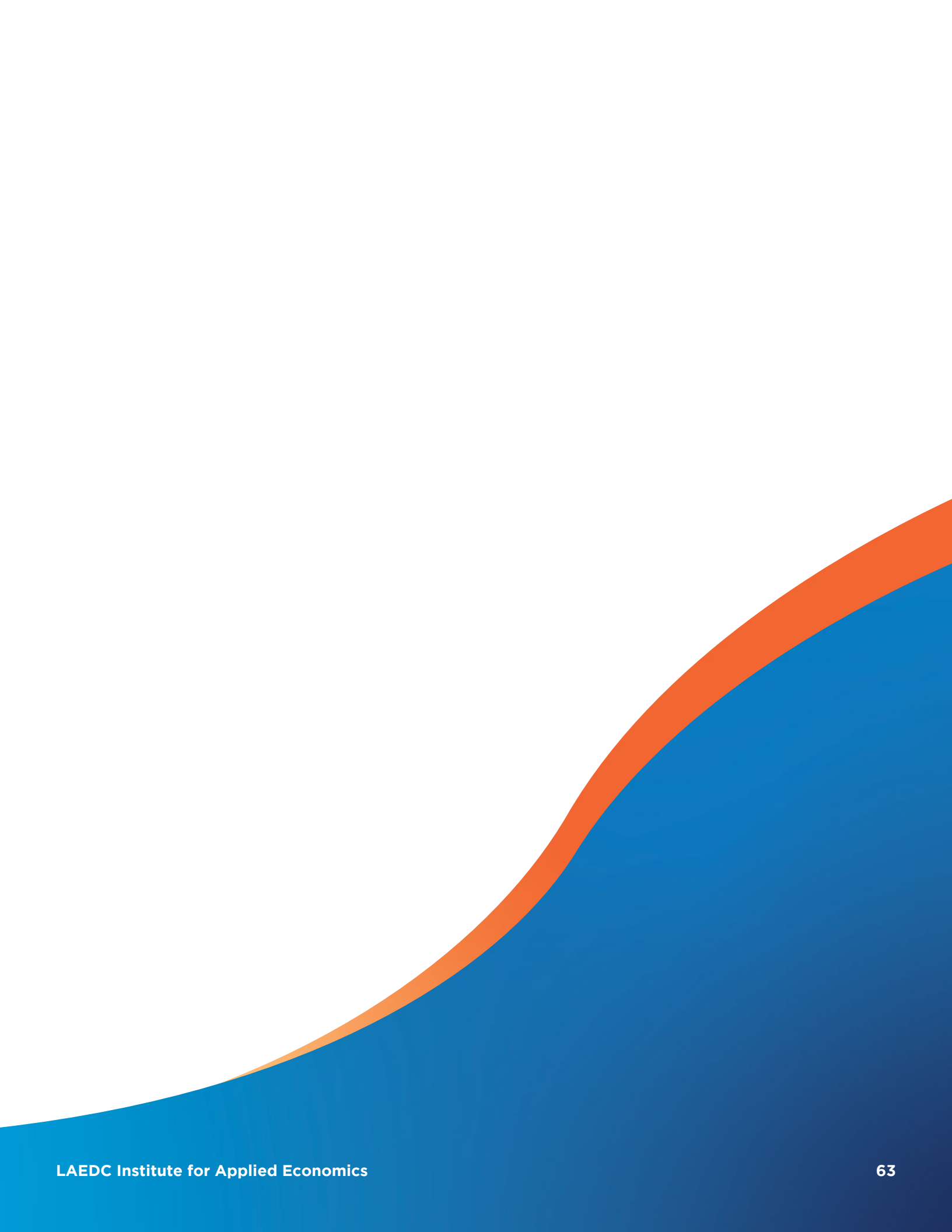
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## Looking for More Data?

The appendix of this report includes forecast tables and quick facts for the United States, California, the 5-county Southern California region and for each of its individual counties. It is available at the LAEDC website at: <https://laedc.org/economic-forecast-2022-report/> or upon request.

At all levels, there has been a general economic recovery over the past year, however, challenges related to the COVID-19 health crisis portend to linger. After a full recovery takes place, we expect the national, state, and the Los Angeles region's economies will likely differ in significant way from the pre-pandemic period.









**LAEDC**

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**ECONOMIC DEVELOPMENT CORPORATION**

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**444 South Flower Street, 37th Floor**  
**Los Angeles, CA 90071**  
**[www.laedc.org](http://www.laedc.org)**